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Memorandum of the 2nd JCC meeting

Memorandum

of

the Second Joint Coordinating Committee Meeting

for

the Implementation of the Digital Migration Project

in

the Republic of Botswana

(March 20, 2015)

Mogomotsi Kaboegamodimo
Deputy Permanent Secretary
Ministry of State President
Government of Botswana

Naoaki Nambu
Team Leader
Implementation of the Digital Migration
Project in the Republic of Botswana
(DiMT Project)

Memorandum of the 2nd Joint Coordinating Committee (JCC) Meeting of the Project for Implementation of the Digital Migration Project in the Republic of Botswana (DiMT Project)

1. Date: 20th March, 2015
2. Time: 08:30-11:40
3. Venue: 216 Conference Room, Department of Broadcasting Services, Mass Media Complex
4. Participants:

   <Botswana side>

   ■ Ministry of State President
      ✧ Mr. Mogomotsi Kaboeamodimo, Deputy Permanent Secretary, Ministry of State President, Project Manager

   ■ Department of Broadcasting Services (DBS)
      ✧ Ms. Bontle Mogotlhwane, General Manager, BTV
      ✧ Mr. Zibani R.S. Makali, Acting General Manager Engineering
      ✧ Mr. Kabo Dikolob, Chief Broadcast Engineer-BTV Studios
      ✧ Mr. Calvin Goiletswe, Chief Broadcast Engineer, Deputy Project Manager, leader of Technology and Licensing WG
      ✧ Mr. Solly Nageng, Head of Programmer, leader of HD program production WG
      ✧ Ms. Lorato Ntuara, Copy Right Administrator, leader of Public relations WG
      ✧ Ms. Salome Senome, Executive Producer, leader of Data broadcasting WG
      ✧ Mr. Edson Malebane, Head Channel Controller, leader of Programing WG
      ✧ Mr. Itummeleng Mmusi, member of Public Relations WG
      ✧ Mr. Earnest Sgokotlo, HD studio trainee
      ✧ Mr. Boyboy, Moreetsi, HD studio trainee
      ✧ Mr. Didibeng Modisenyane, Chief broadcasting engineer-TX
      ✧ Mr. Joel Thuto, Technical Director in Operations

   ■ Botswana Communication Regulatory Authority (BOCRA)
      ✧ Mr. Bathopi Luke, Director Technical Services
      ✧ Mr. Tebogo Ketshabile, Spectrum management engineer

   <Japanese side>
   ■ JICA Botswana Office
      ✧ Mr. Akihiko Hoshino, Residential Representative
      ✧ Mr. Yasuaki Aihara, Assistant Representative

■ JICA Expert Team (JET)

✧ Mr. Naoaki Nambu, Team Leader/Broadcast Policy & Strategy

✧ Mr. Katsuya Terabayashi, Deputy Team Leader/Institution/Training Plan 1

✧ Mr. Akira Saito, Technical Standards 2

✧ Ms. Keiko Uchiumi, Public Relations Plan/Training Plan2/Coordinator

✧ Ms. Chiaki Matsumoto, HD Program Production

✧ Mr. Susumu Sato, Data broadcasting Contents Production

✧ Ms. Oreneile, M Matsetse, Public Relations/Facilitator

✧ Mr. Kabelo, Nkwane, Transmitter Engineer

5. Agenda

Time	Items		Presenter
08:30-08:35	Opening Remarks		DPS
08:35-08:40	Introduction of Participants		
08:40-09:00	Progress Report from each WG	Technology and Licensing WG	Mr. Calvin Goiletswe (Mr. Akira Satio)
09:00-09:20		Public Relations WG	Ms. Lorato Ntuara (Ms. Keiko Uchiumi)
09:20-09:40		HD Program Production WG	Mr. Solly Nageng (Ms. Chiaki Matsumoto)
09:40-10:00		Programing WG	Mr. Edson Malebane (Mr. Masatoshi Sano)
10:00-10:20		Data Broadcasting WG	Ms. Salome Senome (Mr. Susumu Sato)
10:20-10:40	HD studio training in Japan		Mr. Ernest Segokotlo (Ms. Keiko Uchiumi)
10:40-11:00	BOCRA		Mr. Bathopi Luke
11:00-11:10	Tea Break		
11:10-11:30	Review of Activities and PDM indicator		DiMT Project (Mr. Katsuya Terabayashi)
11:30-11:35	AOB		
11:35-11:40	Closing Remarks		DPS

I. Discussion Note in the Second JCC Meeting

1. Opening Remarks

Mr. Kaboeamodimo welcomed Mr. Hoshino, JICA Botswana office and Mr. Nambu, Team Leader, and the working group leaders to the 2nd JCC meeting which is held every 6 months to gauge the progress of the Project for Implementation of Digital Migration Project in Botswana.

He informed that one of the features of this Digital Migration is a Project Management Office (PMO) whose functions occur from the office of the state president headed by himself as the overseer of the implementation of the whole project. He further extended that he is hoping that the reports will bear good progress and solve any bottlenecks which may have been encountered so far.

Mr. Nambu expressed his gratitude towards the 2nd JCC meeting and informed that he is pleased to see that most of the activities are proceeding well. He proposed to the Botswana Counterparts that the PDM can be changed to be more suitable to implementation and management of the project in every JCC meeting.

2. Presentations (Progress Report)

The following presentations were made in the 2nd JCC meeting. The materials of the presentations are attached. (See Annex 1 to 7). The summaries and agendas to be concerned raised in each presentation are noted in this memorandum.

(1) Technology and Licensing WG, Mr. Calvin Goiletswe, DBS

It was explained that the installation of transmitters will be conducted according to four clusters set by DBS. Digital broadcasting will be available from the site that has completed the installation works. ASO schedule has been tentatively set in March, 2016. ASO criteria have been introduced which uses the population coverage of digital broadcasting and penetration of digital receiver as indicators.

- It was confirmed whether the interference exists from neighboring countries like Zambia, Zimbabwe and South Africa. According to BOCRA, there is no interference anticipated. After the commencement of digital broadcasting, the interference will be confirmed again.
- The question was raised as to whether there is a fixed date in which the set top boxes are expected to be on the market.
  With regard to the policy concerning the set top boxes, the cabinet information note will dictate it. The availability of the set top boxes in the market is not known. JET was requested to provide advice on this issue.

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- The DPS advised that we have to have set target dates to show when each activity is supposed to happen such as the start of delivery of equipment, installation and digital broadcasting, and the termination of analogue broadcasting.
  The installation schedule of transmitters and available date of digital broadcasting will be communicated once it has been fixed.
- The question was raised as to how far we are with the completion of the minimum specifications of the standards. Set top box technical specification was publicized by BOCRA. Some of the information included in the technical specification does not match with ISDB-T Standards of Botswana and BOCRA is aware of it and under examination.
- Issue of why Botswana chooses ISDB-T standard is always recurring. We need to move away from that and focus more on taking advantage of the features of the standard that we have chosen.

(2) Public Relations WG, Ms. Lorato Ntuara, DBS

The progress has been reported on the mall event and TV, the Radio and Daily news adverts. The demarcation has been discussed between the local consultant companies of public education on the migration by the tender project and JICA project.

- The question was raised whether there is a fixed time of the completing of the tender project. The tender processes should be speeded up to kick start the overdue public education.
- Biggest issue is people are requesting for set top boxes and how they can be attained. The issue was raised during the mall demonstrations as to how we are addressing the question of when the set top boxes will be available and its price.
  The following information should be consistent when communicate with the public, availability of receivers, the likely cost of receivers and when and where those can be purchased. In order to be consistent, a frequently asked question list and exemplary answers should be prepared.
- During these demonstrations, information going out to the public should be handled by the leader of the events to ensure consistency in information disseminations.
- Media briefing will be on the 31st March 2015.
  The preparation meeting will be held on 23rd March, Monday from AM 9:00.

(3) HD Program Production, Mr. Solly Nageng, BTV

It was explained that at the first training period, digital migration is taken up to produce feature news which also is used as a tool for public relations activity. During

the second training period, edutainment program that takes advantage of HD format will be produced to promote HD programs. In the final training period, football game will be produced that takes advantage of HD format and Data broadcasting.

- Film industries who are our stakeholders can also be engaged to assist with content production.

(4) Programing WG, Mr. Edson Malebane, BTV

The objective of the market survey was introduced. The market survey has been conducted and scheduled with public relations activities on 13th, 14th and 20th and 21st March in popular shopping malls. The questionnaire was mainly aimed at producing program schedule for digital broadcasting. The result of the market survey has been presented.

- The Public Relations group needs to continually send out information that proper condition of the receiving system is a requirement for the public to access features of the terrestrial TV/ data casting i.e. equipment that one needs for this migration.
- In the market survey questionnaire, we should rephrase our question so that it doesn't give the impression that this migration is about Multichoice (satellite)
- Data broadcasting or normal television programming in the questionnaire should be clear so that it does not confuse people.
- The market survey should be more extended to remote areas where people watch terrestrial television to get a reflection of people who watch solely terrestrial TV.

(5) Data Broadcasting WG, Ms. Salome Sanome

The section to produce Data broadcasting has been presented. The number of staff members and their professions has been introduced. Where the section is situated in the current organizational structure is not fixed yet. Given the fact that the government is downsizing its operation, the members are suggested to be filled from the current DBS staff members.

- Manpower issue to be able to carry out all these tasks. However, people will be reassigned to work with whatever is available. Given the government is downsizing the operation, the necessary staff members are likely to be reallocated from the existing sections.

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(6) HD Studio Training in Japan, Mr. Ernest Segokotlo

What has been learnt during the HD studio training in Japan was presented. In house training for sharing the results of the training will be organized.

- HD training that took place in Japan is very important such that participants who took part in it need to arrange for knowledge sharing and skills transfer to the rest of the BTV or technical staff.
- DPS has requested that HD training should not be provided only to technical operators and engineers but it should be open to directors and producers too.

(7) BOCRA

BOCRA presented on the following points; frequency coordination, development of technical specifications for broadcasting equipment, development of digital terrestrial television licensing framework, licensing of commercial broadcasters, public awareness campaigns and establishment of local content production fund.

3. Approval of PDM Modifications

(1) Review of Activities and PDM indicators, Mr. Katsuya Terabayashi

The proposal was made in the presentation on PDM indicators and some modifications in the Version 1 of PDM through the review of the activities. The Botswana side agreed on those figures of PDM indicators and modifications necessary to smoothly implement the rest of activities. The PDM version 2 has been approved for the rest of the project period.

- Very important plan which can cater for improving content production skills
- Very good indicators that will help working groups monitor their progress.
- The presentation should be compiled with the review of the activities so that Cabinet ministers can appreciate hence facilitating big decisions that have to be taken regarding the project.
- CMS has been removed so the question was raised as to whether there is any complimentary arrangement. The production engineering will be added as one of the professions of Japanese expert.
- During the formulation of the PR plan, we could not cover all the activities by the experts given the short time for the project implementation of 2 years.
- Important for all the groups in the next assignment to commit to some indicative timelines for the activities so that when we sit again for progression assessment in the next meeting, we refer to timelines.
- The figures that we have for 56.8% is constituted by people on satellite hence we

have to advertise this as much as possible to ensure people move to terrestrial.

- The role of monitoring sheet has been reminded and the contents of monitoring sheet version 2 has been confirmed as per the Annex-8.

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Project Name: Implementation of the Digital Migration Project
Period of Implementation: September 2014 to August 2016   **Target Group: Staff of DBS, BOCRA and other concerned with Implementation of the Digital Migration**
Target Area: The Entire Country of Botswana   **Date: 20th Mar. 2015**
Implementing Agency: Department of Broadcasting Services (DBS), Ministry of State President   **Version. 2**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose			
Environment, which allows DBS to implement self-sustainably the terrestrial digital broadcasting that takes advantage of the features of ISDB-T, is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Progress Report	·Developments of DTTB network and related equipment are executed as planned. ·Developments of HD studio systems are executed as planned. · ISDB-T receivers are penetrated to households as planned.
Outputs			
1. Various plans necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial broadcasting station licensing criteria are developed. 1-5. Draft Public Relations Plan is developed. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.
Activities		**Inputs**	
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To review terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration 1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan	**Japanese Side** 1. JICA Experts (1) Team Leader/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan 2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming (11) Production Engineering	**Botswana Side** 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting	2. Equipment · Data Broadcasting Contents Management System: 1 set 2. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	**Preconditions** · Digital migration plan is not excluded from the national development plan.

Procurement of CMS will be determined late

4. **AOB**
   - Highly fundamental for working group leaders to meet amongst them for updates about latest information and development with other groups. The DPS suggested that he will incorporate their meeting in the weekly Wednesday meeting.
   - Meeting on Monday at AM 9:00 with the assigned team to prepare for the media briefing.
   - BOCARA has invited DBS/ DiMT team to join in their annual event in Ghanzi in May, something that will help in the market survey and also disseminations of information.
   - Leaders of the working groups should get together and package information pack for frequently asked question to ensure uniformity of information to the public.
   - Highly imperative to establish a call centre here at DBS to complement the activities taking place on the field.
   - The following points were suggested by the team leader of JET.
     - ➤ To accelerate public awareness by the public relations plan, it is important to list up necessary activities and allocate appropriate budget, harmonize efforts made by each WG, mount an effort to promote receivers to each household for early ASO and establish a call centre to support the viewer.
     - ➤ To know the public demands for the programs of BTV, the market survey should be continued by targeting different groups and areas and BTV prepares draft programing schedule which takes target audience, air time and style of programs into consideration and take challenge to develop new style of programs.
     - ➤ To procure necessary equipment and facilities, it is recommended that BTV prepare the concepts of design for upgrading, make milestone of upgrading of the systems and facilities for adapting HD, and allocate the budget for the upgrading.

5. **Closing Remarks**

   The DPS thanked JICA and other stakeholders for the insightful and fruitful the 2nd JCC meeting which is indicative that there is progress on the project. He informed the forum that for the entire stay of the experts, the working groups will maximize their expertise and use them where possible to make this project a success. Mr. Kaboeamodimo congratulated the good work this far by the working groups and encouraged them to work hard so that in the next JCC meeting, there is much more progress with the project. He concluded by encouraging the leaders to proceedings of the meeting with other group members to achieve inclusiveness as much as possible.

<Attachments>
    Annex-1: Presentation Material by Technology and Licensing WG
    Annex-2: Presentation Material by Public Relations WG
    Annex-3: Presentation Material by HD program production WG
    Annex-4: Presentation Material by Programing WG
    Annex-5: Presentation Material by Data broadcasting WG
    Annex-6: Presentation Material by HD studio training in Japan
    Annex-7: Presentation Material of Review of Activities and PDM indicator
    Annex-8: Monitoring Sheet Version 2

Technology and Licensing WG

Implementation of the Digital Migration Project
in
Republic of Botswana

2nd JCC meeting
20th March, 2015
JICA Technical Cooperation Project

Content

1. To prepare ASO Plan
2. To review ISDB-T Standards of Botswana
3. To review specifications for receivers
4. To prepare terrestrial broadcasting station licensing criteria
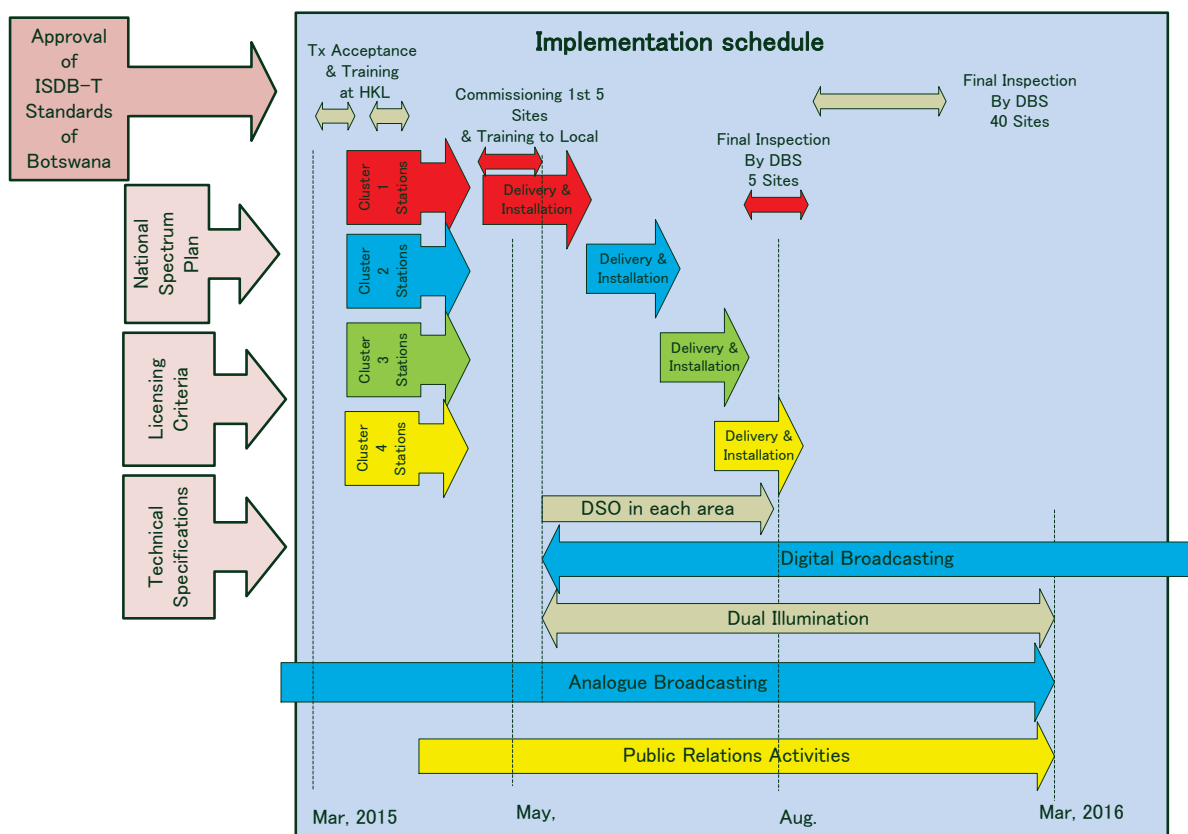
1. To prepare ASO plan

- DBS divided 45 transmitting stations into 4 clusters and installation and construction works will be conducted from **Cluster 1 to 4** by four teams by the Supplier.

- DSO will start from the transmitting stations that completed construction and installation works.

- Though the draft ASO plan has been presented in Technology and Licensing WG, the detail has not been discussed yet(note). The tentative target of ASO is March, 2016 which accords with the end of public education awareness activities by the tender project.

  Note

  The target of ASO has not been fixed mainly because of the following reasons.
  - There is no commercially available receivers in the market.
  - There is no policy on the provisions of STB.
  - The service coverage is not confirmed yet.

1-1 Implementation Schedule

1-2 Transmitter installation clusters

No	Installation Sites Cluster 1	Digital Power (Watts)	Ch
1	Sesung	750	41
2	Oliphant's Drift	125	37
3	Mahalapye	500	31
4	Serowe	500	46
5	Mmashoro	500	30
6	Francistown	500	44
7	Kasane	125	36
8	Maun	125	44
9	Ghanzi	500	25
10	Mabutsane	750	24
11	Tshabong	250	37
12	Senyamadi	500	45
13	Lobatse	500	47
14	Kanye	125	43
15	Selebi-Phikwe	1200	39
16	Gabane	2500	24

No	Installation Sites Cluster 2	Digital Power (Watts)	Ch
1	Sojwe	500	25
2	Tshootsha	250	38
3	Ncojane	250	30
4	Hukuntsi	500	33
5	Werda	250	31
6	Middlepits	125	47
7	Bokspits	125	29
8	Mabule	125	33
9	New Xade	250	45
10	Kang	500	48
11	Charleshill	500	35

No	Installation Sites Cluster 3	Digital Power (Watts)	Ch
1	Chadibe	500	44
2	Maope	500	28
3	Molalatau	250	21
4	Letlhakane	500	39
5	Mopipi	500	23
6	Motopi	500	
7	Sekakangwe	500	22
8	Maitengwe	125	35
9	Semowane (sowa junction)	250	28
10	Pandamatenga	125	38

No	Installation Sites Cluster 4	Digital Power (Watts)	Ch
1	Matsitama	500	33
2	Gweta	500	24
3	Mabele	125	26
4	Sehithwa	250	26
5	Gumare	250	28
6	Sepupa	750	25
7	Ntsweseolo	250	33
8	Sebele	1250	24

1-3 Transmitter Sites Map

NOTE: Red site shows VHF in Analogue

1-4 ASO Criteria

It is necessary to prepare ASO criteria by which the judgments to conduct ASO is made.

The coverage area of digital transmitter network and the penetration of receiver will be an indicator for ASO criteria.

1. Service Coverage : **90%** of analogue service area
2. Penetration of Receiver :**85%** of household

If each area covered by each transmitter satisfies this criteria, ASO can be realized.

2. To review ISDB-T Standards of Botswana

- Technology and Licensing WG in DiMT Project conducted discussions on ISDB-T Standards of Botswana from the beginning of the Project for almost two months based on the document made by DiBEG TF.

- With regard to EWBS, DiMT worked hand in hand with NDMO to develop the Area Code Table.

- The document has been officially **submitted to BOCRA on 3rd Dec, 2014** for its approval.

- BOCRA informed to JET that they divided the document into three parts, 1. Main body, 2. Appendix-1 Operational Guideline, 3. Appendix-2 Development of ISDB-T Standards of Botswana to be approved in BOCRA

- ISDB-T Standards of Botswana was examined in the Regulatory Committee in BOCRA on **2nd Feb**, and forwarded to the Board meeting for its approval.

- The document was **approved on 10th March** in the BOCRA's board meeting. The document will be available on their website in one week.

3. To review specifications for receivers

- The Specification for receiver involve three types of receivers such as STB, IRD and Portable/Mobile.

- Those specification documents will be mainly used for type approval.

- Technical specification for STB that has been discussed in the WG has been **submitted** with ISDB-T Standards of Botswana on **3rd December**.

- Before the submission, BOCRA had already approved technical specifications for STB by going though the public consultation on November 2014 and it was made to conform to all standards as a generic specifications.

- Draft IRD technical specification, Portable/Mobile technical specification that conform to ISDB-T Standards of Botswana has been communicated with BOCRA on 9th February to be given feedback and comments. Those comment are waited.

- With regard to IRD technical specification, comments are waited from TF too. In particular, it was raised by a Japanese manufacture that EMC of CISPR24 is considered to be strict for television technical specification.

Parameters of STB technical specifications that does not match with ISDB-T Standards

Page	Item	JET corrections	BOCRA Version (Nov, 2014)
4	4 Auto Search	Auto Search	Auto/Manual Search
	4 Auto Search	The unit will perform an automatic search for channels	The unit will perform an automatic search for channels or can be selected manually
5	9 Input signal	0dBm to -78.4dBm	-35dBm to -85dBm
	12 Guard Intervals	1/4, 1/8, 1/16, 1/32	1/4, 1/8, 1/16, 1/32, 1/64, 19/128, 19/256
	13 Channel/Noise Ratio	5dB(QPSK1/2) to 23dB (64QAM 7/8)	3dB(QPSK1/2) to 24dB (256QAM 5/6)
	14 Interleaving	Bit, Time, Frequency, Byte	Bit+Cell+Time+Frame
	15 Video decoding	MPEG-4 (H.264)	MPEG-2 and MPEG-4 (H.264)
6	II. Decoding and Outputs		manually is added with approved processes and acceptable to
11	XII. Input signal	Same as 9. Input signal	
	XIII. Subtitles	The STB shall be able to display subtitling in reference to ARIB STD-B24 (last sentence)	The STB shall be able to display Subtitling in reference to ETSI 300 706
	XIV. C/N Range (Rice Range)	Same as 13. Channel/Noise Raito	
12	Frequency off set	(Not required)	Frequency off set added

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4. To prepare terrestrial broadcasting licensing criteria

- BOCRA issued consultation paper on licensing framework and collected comments by 23rd January 2015.

- Workshop on the consultation paper has been conducted on 3rd Feb, 2015.

- The licensing framework for the commercial broadcasting stations are currently under development.

- # Thank you.

- # Arigato gosaimas

- # Ke a leboga
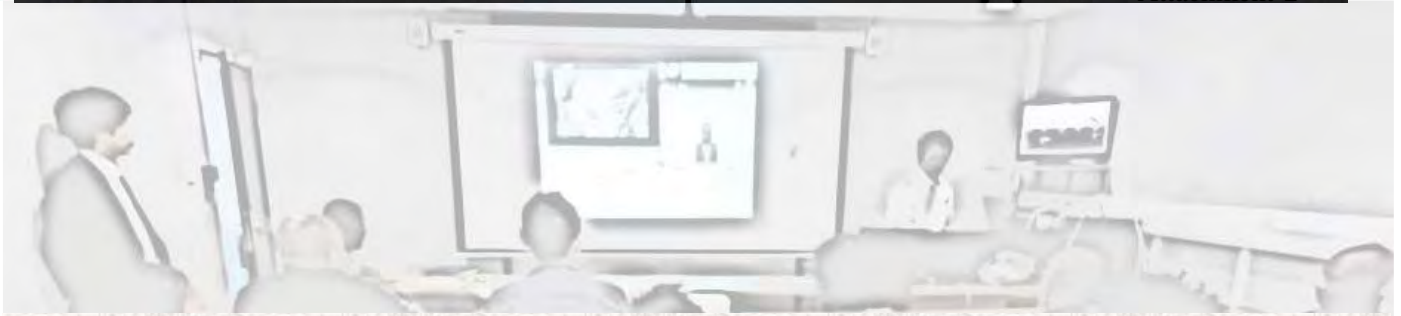
PR Working Group

Second Joint Coordinating Committee

March, 2015

## JICA Technical Cooperation Project

Content

1. DiMT Activities
2. Framework of Public Relations Activity
3. Progress
4. Additional PR activities (Pilot)
5. Responsibility

1. DiMT Activities

1. Establishment of Public Relations WG

2. Collect necessary data

3. Discussion and to develop Public Relations Plan

4. Holding of the first public promotion seminar (Gaborone)

5. Analysis of collect data

6. Improvements and revisions of the public relations plan

7. Holding of the second public promotion seminar

8. Holding of the third public relation seminar

2. Framework of Public Relations Activity
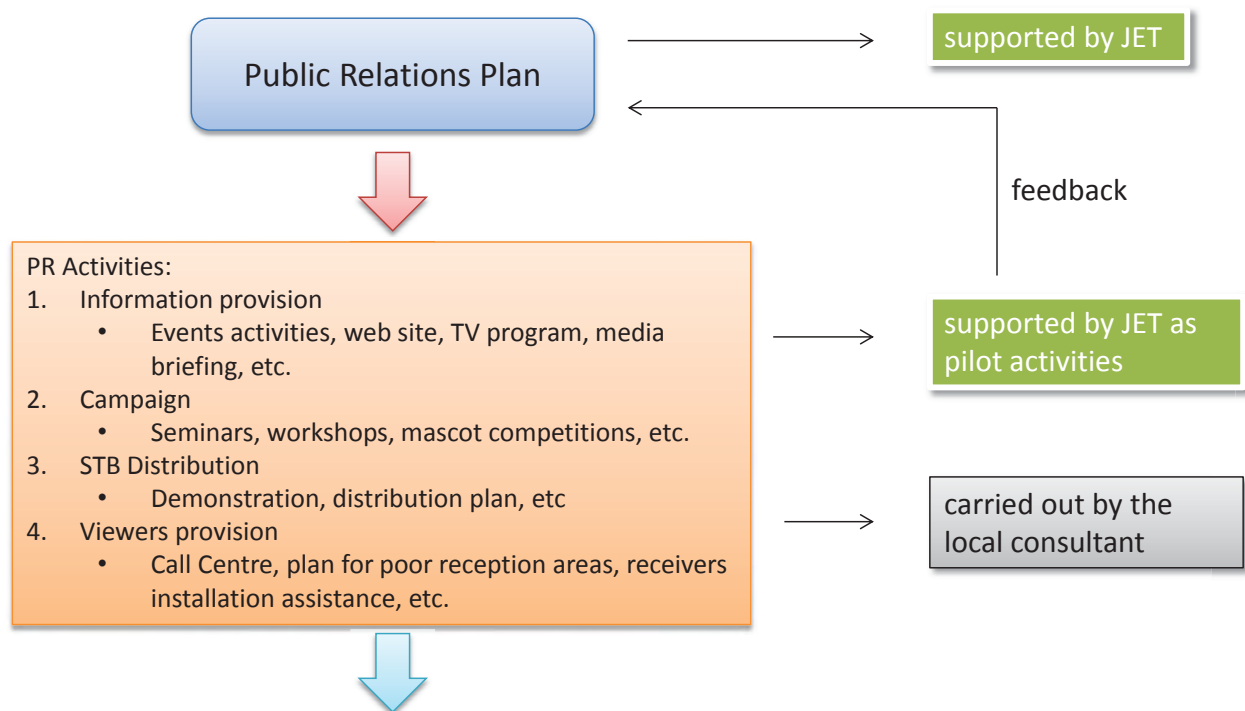
<tentative target completion date>
The activities are conducted by 1 year after ASO.

3. Progress - 1

Draft contents of public relations plan

Preface

1. Background

2. Objectives

3. The Basic Concept of Public Relations Plan

4. Category of Activities

5. Action of Activities

6. STB Distribution Plan

7. Budget

8. Timeline and Validity

9. Indicator

10. Public Relations after ASO (Analogue Switch Off)

3. Progress – 2

PR promotional materials procured for pilot seminars

100 T-shirt

3 Banners

200 pens

200 Posters

200 Flyers

4. Additional PR activities (Pilot)

- Promotions on TV, Radio and daily news ongoing
- Internal education for DBS/DIS has already been done on 12/03/15
- Mall demonstrations have started –Airport Junction 13/14 & Main mall 20/21
- We meet and evaluate our progress every Thursday

1. Internal Education for DBS, BTV

2. Promotion on Daily News

3. Mall Demonstration

5. Responsibility

Activities	DiMT Project	Local consultant hired by DBS
Development draft Public Relations Plan	O	
TV Advert (Initial)	O	
TV Advert (Others)		O
Radio Advert (Initial)	O	
Radio Advert (Others)		O
Media Briefing (24th Mar.)	O	
Promotional Materials (Initial)	O	
Promotional Materials (Others)		O
Seminar in Gaborone (16th Apr.)	O	
Seminar in Francistown (7th May)	O	
Collaboration other events	O (Ghanzi)	(TBD)
Seminar in Maun (TBD)	O	
Seminar (Others)		O
Modification of Draft Public Relations Plan	△	O

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Thank you for your attention!

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BOTSWANA TELEVISION

HIGH DEFINITION PRORGAM PRODUCTION WORKING GROUP

JICA

DIGITAL MIGRATION PROJECT
20th March 2015

WG MEMBERS

	Name	Position
1	Solly Nageng	Head of programmers
2	Linet Habana	Asstant Commissioning Editor
3	Gaamangwe Mathame	Programme Producer
4	Gail Kgomotso	Programme Producer
5	Ontlametse Gaothuse	Videographer
6	Kefilwe Mokgaotsane	Reporter - News and Current affairs
7	Audrey Bonang	Content Acquisition
8	Ponatshego Ponatshego	Graphic Designer
9	Dintle Gaolebale	Studio Director (Operations)
10	Ernest Segokotlo	Engineer

PURPOSE OF WORKING GROUP ACTIVITY

❑ Enhance and improve skills and knowledge of BTV staff

   in HD format program production

   ✓ On the job training (OJT)

   ✓ Produce programs to broadcast

❑ HD Studio Operation Training (Technical) was executed
   in Tokyo, Japan in February, 2015

PLAN and GOAL

❑ Produce three programs and broadcast
   1. Informational Feature News
   2. Edutainment Program
   3. Live Football with Data Broadcasting

❑ Coordinating and collaborating with Public Relations,
   Programming, and Data Broadcasting WG to improve
   quality of production and programs at BTV

INFORMATIONAL FEATURES

❑ First Project – **Informational news features**

   ✓ In three parts

   ✓ To provide information about digital migration

   ✓ Spread the news of BTV becoming "DIGITAL" and promote the digital TV broadcasting

❑ 5 minutes Duration

❑ Currently in production

❑ Collaboration production of HD Program Production, Programming, and PR WG

EDUTAINMENT PROGRAM

❑ The 2nd Project - **Edutainment**

❑ Pre-production including research and gathering information have started in February and currently in progress

❑ Production (shooting) to start before the scheduled August

❑ Possibly produce 2 programs

   1. 60 minutes program

   2. Series of 3-5 minutes short programs for several re-broadcast

❑ Consultation with the Department of Forestry and Range Resources and JICA project team

DBS
Department of
BROADCASTING SERVICES

PURPOSE AND CONTENT OF EDUTAINMENT PROGRAM

❑ Program for a whole family

❑ Create awareness of FOREST, one of the important natural resource of Botswana for daily life of people and wild animals

❑ Capture beautiful nature and landscapes Botswana, using the feature of the HD technology

❑ Educate people about importance and necessity to protect forest by introducing several projects and activities by Department of Forestry and Range Resources (DFRR)

LIVE FOOTBALL

❑Collaboration production of HD program production, Data Broadcasting WG and Sports section

❑Football game on a wider screen and more information

❑Use of HD cameras will be able to show more activities on the screen

❑Data broadcasting will be able to enrich the content of the game; providing much more information to the viewers and making the program more enjoyable

CURRENT PRODUCTION

❑ Feature 1 - Broadcast during the 1st week of April

  ✓ Digital migration, what is it? – The history of the concept of migration and why Botswana opted for ISDBT

❑ Feature 2 - Broadcast during the 1st week of May

  ✓ How much do we know? Awareness – Progress being made towards the launch date

❑ Feature 3 - Broadcast during the 1st week of June

  ✓ The Countdown – Last minute preparations and update

PRODUCTION MATERIALS

❑ Since there is no manuals how to produce programs at BTV, JICA expert provides materials to the members for reference

❑ Blank and examples of

  ✓ Program proposal sheet
  ✓ Shot list
  ✓ Shooting schedule
  ✓ News Check List
  have been introduced to help staff to organize production

TENTATIVE PLAN

Year													2014	
Month	---→ Planning												November	December
Overall Pre-production	---→ News Production: Pre-production to Post-production												---→	
Year	2015													
Month	January	February	March	April	May	June	July	August	September	October	November	December		
Overall Pre-production		---→			Pre-production			---→			---→ Pre-production			
Year	2016													
Month	January	February	March	April	May	June		---→ Educational Program Production						
Overall Pre-production			---→					---→ Data Program Production						

Joint Meeting with Data Broadcasting WG on 11.03.15

WG crew interview public at Digitalization PR Event in Airport Junction on 13.03.15

WG film crew shooting at Digitalization PR Event in Airport Junction on 14.03.15

THE END

THANK YOU
FOR YOUR ATTENTION

A-2-77

DIGITAL MIGRATION

PROGRAM SCHEDULE

DBS
Department of
BROADCASTING SERVICES

Btv

QUALITY RADIO AND TELEVISION

Mandate

- To gather information from the public that will help draw broadcast schedule.

- Information provided to guide in terms of genres, local vs. International content as well as data casting.

- Information to indicate readiness of the nation to migrate

SURVEYS

- Mini survey was done on mass media staff on 12/03/15
- 18 Staff members filled the questionnaire
- Surveys for public done on 13/03/15 and 14/03/15
- Over 500 people visited the demonstration side
- 276 people filled the questionnaire

DBS Department of BROADCASTING SERVICES

Btv

QUALITY RADIO AND TELEVISION

QUESTIONARE

Questionnaire After Demonstration (Airport Junction)

1. *Gender*

   Male ☐   Female ☐

2. *Age group*

   Below 16 ☐   16 – 25 ☐   26 – 40 ☐   40 – 60 ☐   Above 60 ☐

3. *Where do you live?*

   _____

4. *How often do you watch Botswana television?*

   Very Often ☐   Sometimes ☐   Never ☐

5. *What time do you usually watch Botswana Television?*

   Morning ☐   Day ☐   Evening ☐   Night ☐

6. *What is your favorite show on BTV?*

DBS Department of BROADCASTING SERVICES

Btv

QUALITY RADIO AND TELEVISION

Questionare

1. *Which new program do you want to* _____

2. *Do you use Internet at home?*

   Yes ☐   No ☐   Reasons : _____

3. *Which do you prefer?*

   Local Content ☐   Internationally Popular Content ☐

4. *Do you watch television (BTV) by Satellite or Terrestrial?*

   Satellite(Multi Choice) ☐   Terrestrial ☐

5. *Was it easy to understand what data broadcasting is?*

   Yes ☐   Not really ☐   No ☐

6. *How was the layout & arrangement of the information?*

   Good ☐   Just OK ☐   Bad ☐

Questionare

1. *Was it easy to operate?*

   Yes ☐   Not really ☐   No ☐

2. *Will you use the service once it has started?*

   Yes ☐   No ☐   Reasons : _____

3. *What information would you like to see on data broadcasting?*

   Sports ☐   Drama ☐   Music ☐   Movie ☐   News ☐   Weather ☐

   Program Schedule ☐   Other: _____

4. *Which shows would you like to have linked to data broadcasting?*

   News ☐   Sports ☐   itshireletse ☐   Silent Shout ☐   The Eye ☐   Movies ☐

   *Other:*_____

5. *What genre of television would you like to see on mobile television?*

   Sports ☐   Drama ☐   Music ☐   Movie ☐   News ☐   Weather ☐

   Other: _____

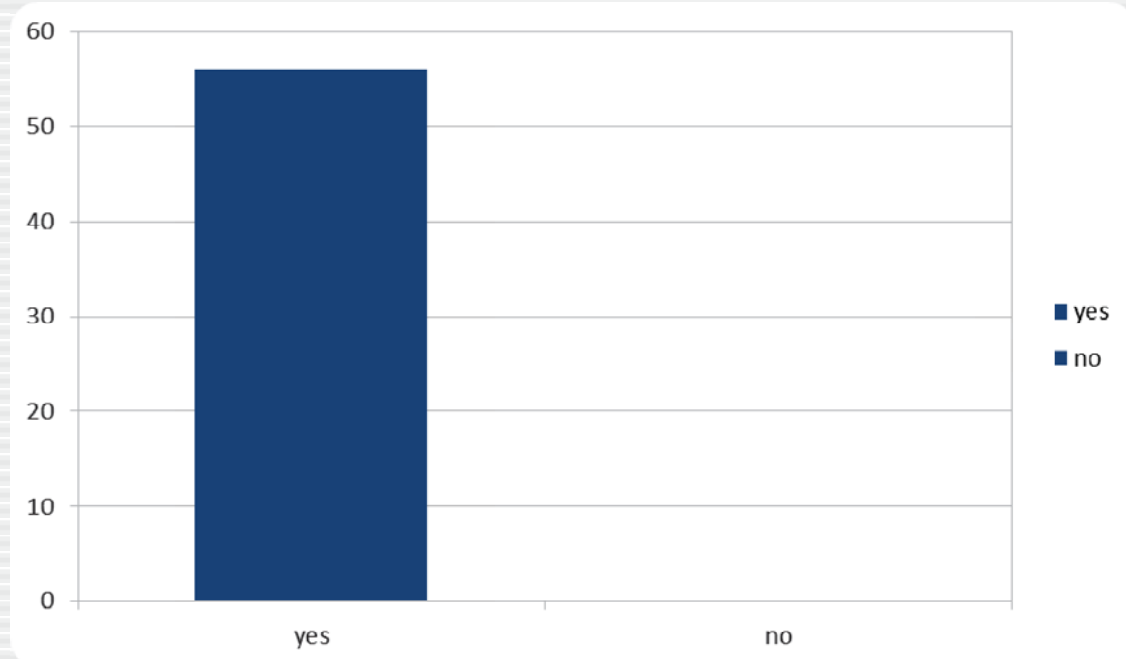6. *What improvements do you think can be made to the demonstration?*

Results of Survey
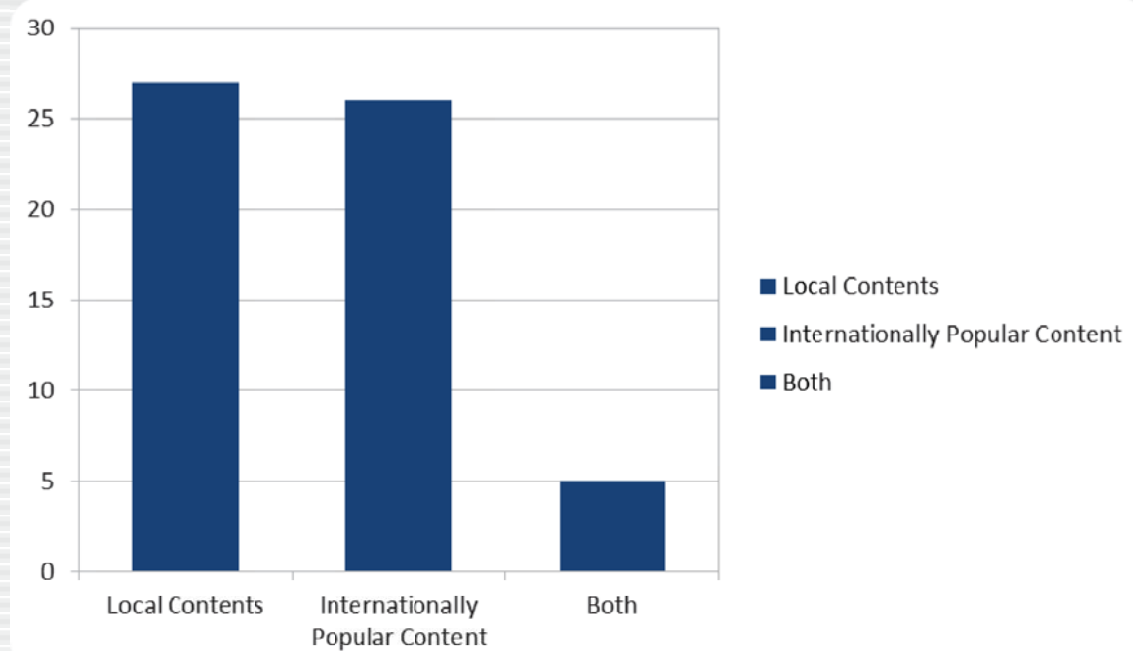# Age Group

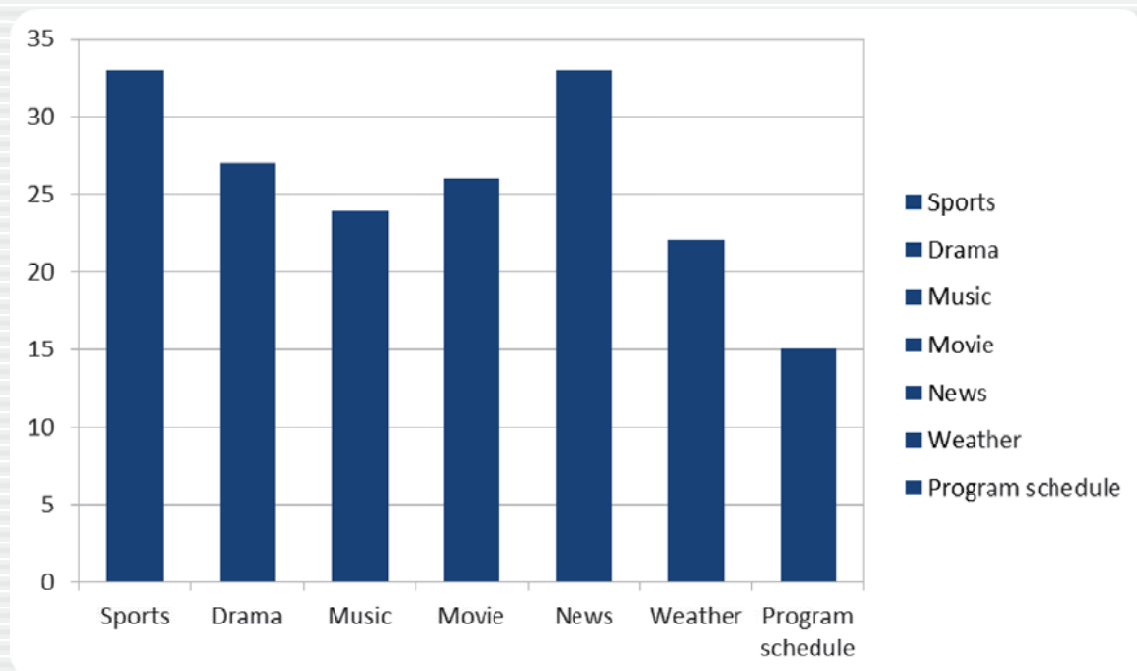QUALITY RADIO AND TELEVISION
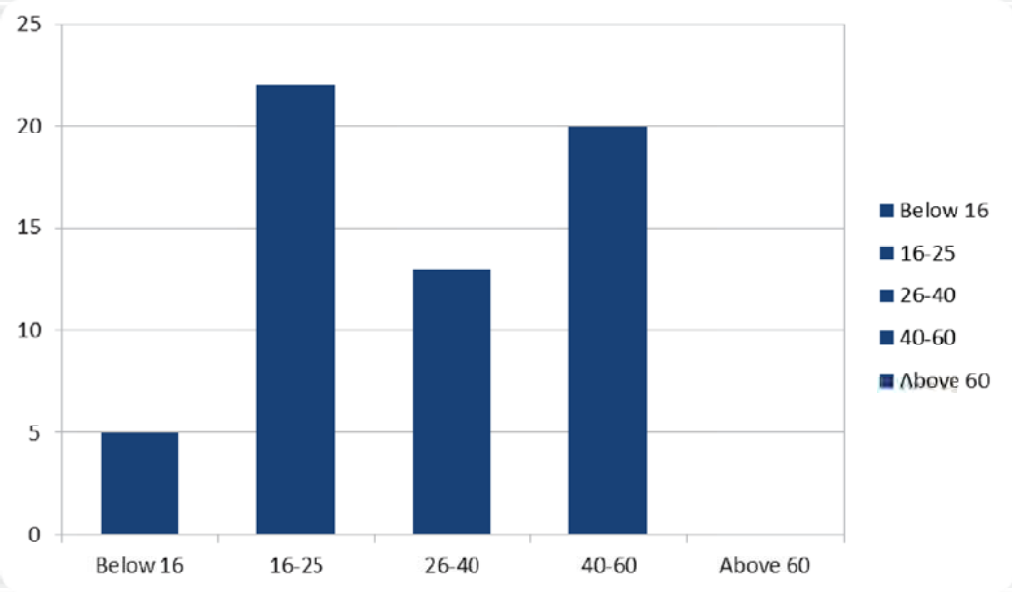
Transmission Mode
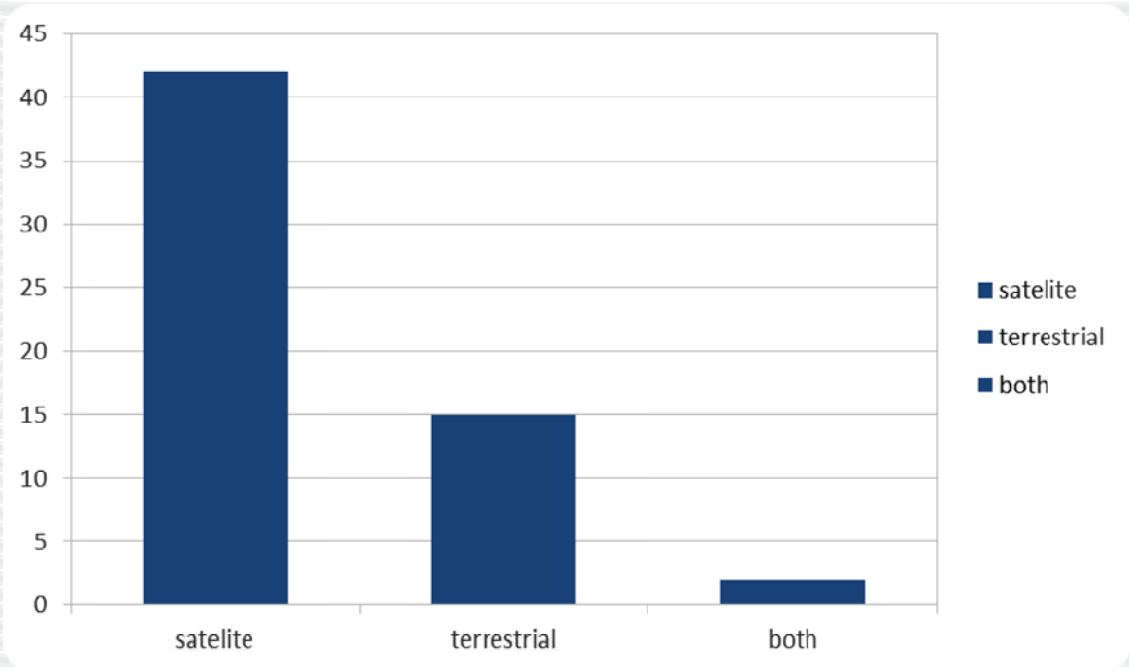
Migration Pattern

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CONTENT PREFERANCE

DATA BROADCASTING CONTENT WISH

Observations

- Call for deliberate increase of local content (Local soapies)

- Call for attractive foreign content(South African Soapies)

- Demonstrations to be done in Setswana , height of monitors to be improved as well as the space

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QUALITY RADIO AND TELEVISION

Next Surveys

- Friday March 20th 2015 (9 a.m. -4p.m)
- Saturday March 21st 2015 (9a.m. -4p.m
- VENUE : Gaborone main mall

- THANK YOU.

Datacasting WG

Implementation of the Digital Migration Project
in
Republic of Botswana

2nd JCC meeting

20th March, 2015

JICA Technical Cooperation Project

Table of contents

- Purpose of WG
- Establishment of Datacasting Unit
- Co-working with existing sections
- Datacasting Unit Equipment & Design
- Training system for data broadcasting
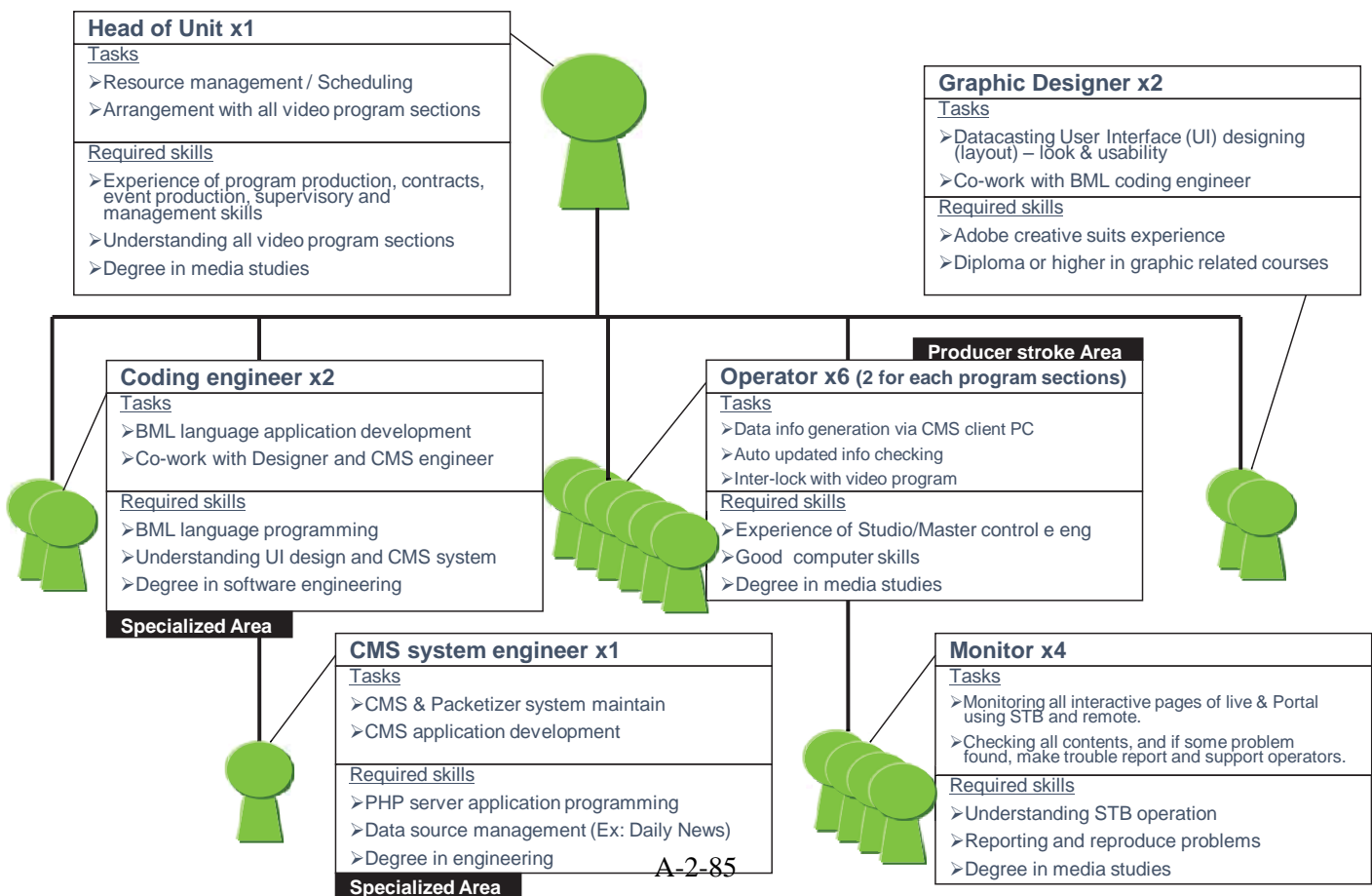- Demonstrating data broadcasting for market survey

Data Broadcasting WG Purpose

Objectives	Activities	Scope of Work and Responsibility
• Learn operation technology for stable Data broadcasting and the ability to produce advanced Data broadcasting programs	• To establish Data broadcasting section • To prepare Data broadcasting program production training system • To design and produce Data broadcasting programs	• Matters relating to the establishment of Data broadcasting section, Data broadcasting program production training system, and planning and production of Data broadcasting programs

Data Broadcasting WG Members

Ms. Salome Senome was appointed as the leader of the WG.

No	Name	Position
1	Salome Senome	Executive producer
2	Gaone Karele	Graphic Designer
3	Gosaitse Koobonye	Marketing
4	Kefilwe Leero	Programme Producer
5	Gaotsenwe Ngwako	Sports Sports
6	Kedirileng Makgasa	Engineer
7	Itumeleng Siviya	News and Current affairs
8	Tabona Luza	Engineer
9	Torotea Mmopi	Program Producer
10	Beauty Sendi-Mpho	Editor
11	Bame Mogomotsi	Acquisition
12	Kaone Mosenti	Director
13	Maipelo Montwedi	Programing

Datacasting Unit
<Datacasting dedicated members>

Head of Unit x1

Tasks
- Resource management / Scheduling
- Arrangement with all video program sections

Required skills
- Experience of program production, contracts, event production, supervisory and management skills
- Understanding all video program sections
- Degree in media studies

Graphic Designer x2

Tasks
- Datacasting User Interface (UI) designing (layout) – look & usability
- Co-work with BML coding engineer

Required skills
- Adobe creative suits experience
- Diploma or higher in graphic related courses

Coding engineer x2

Tasks
- BML language application development
- Co-work with Designer and CMS engineer

Required skills
- BML language programming
- Understanding UI design and CMS system
- Degree in software engineering

Specialized Area

Operator x6 (2 for each program sections)

Producer stroke Area

Tasks
- Data info generation via CMS client PC
- Auto updated info checking
- Inter-lock with video program

Required skills
- Experience of Studio/Master control e eng
- Good computer skills
- Degree in media studies

CMS system engineer x1

Tasks
- CMS & Packetizer system maintain
- CMS application development

Required skills
- PHP server application programming
- Data source management (Ex: Daily News)
- Degree in engineering

Specialized Area

Monitor x4

Tasks
- Monitoring all interactive pages of live & Portal using STB and remote.
- Checking all contents, and if some problem found, make trouble report and support operators.

Required skills
- Understanding STB operation
- Reporting and reproduce problems
- Degree in media studies

A-2-85
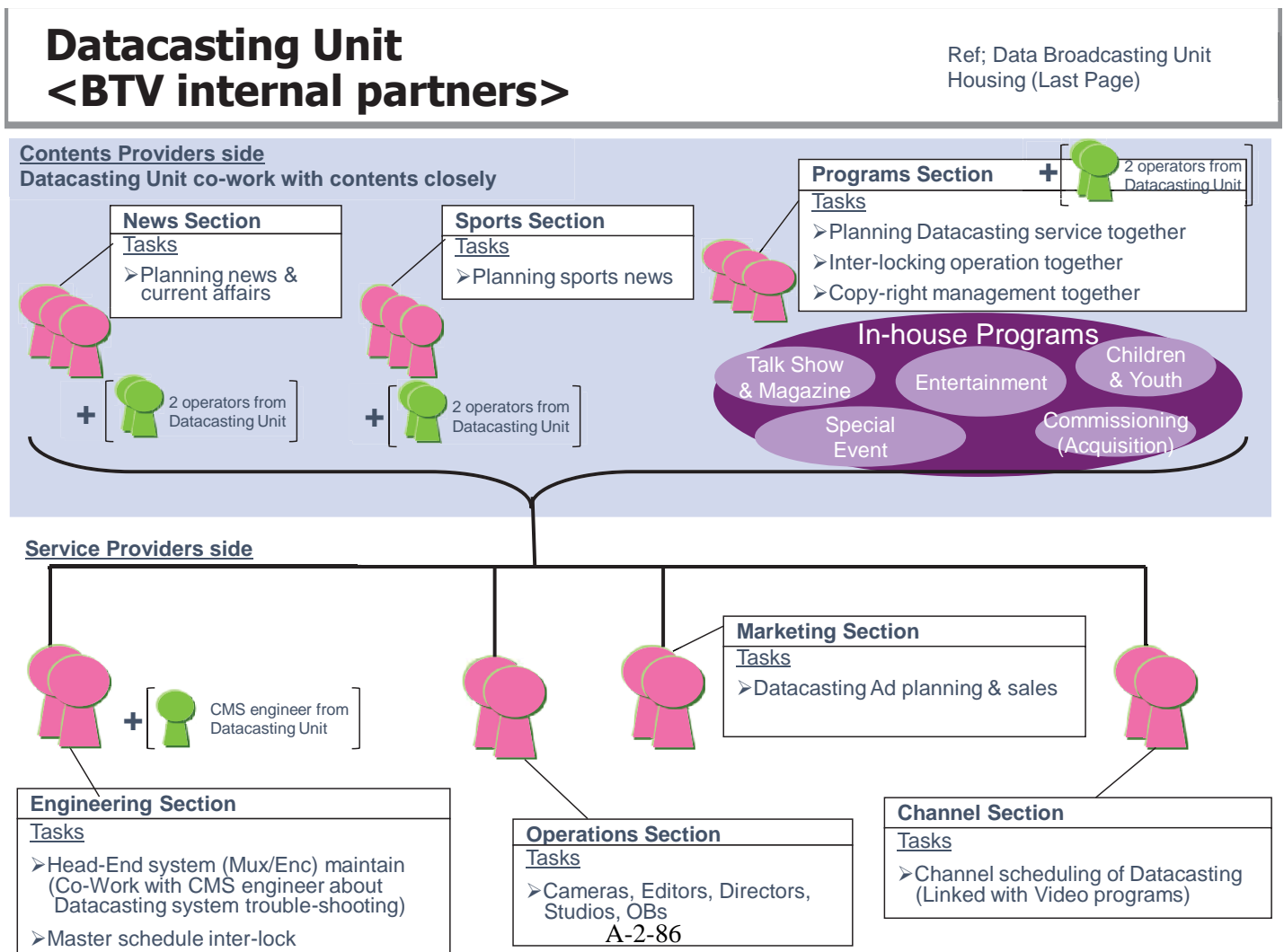
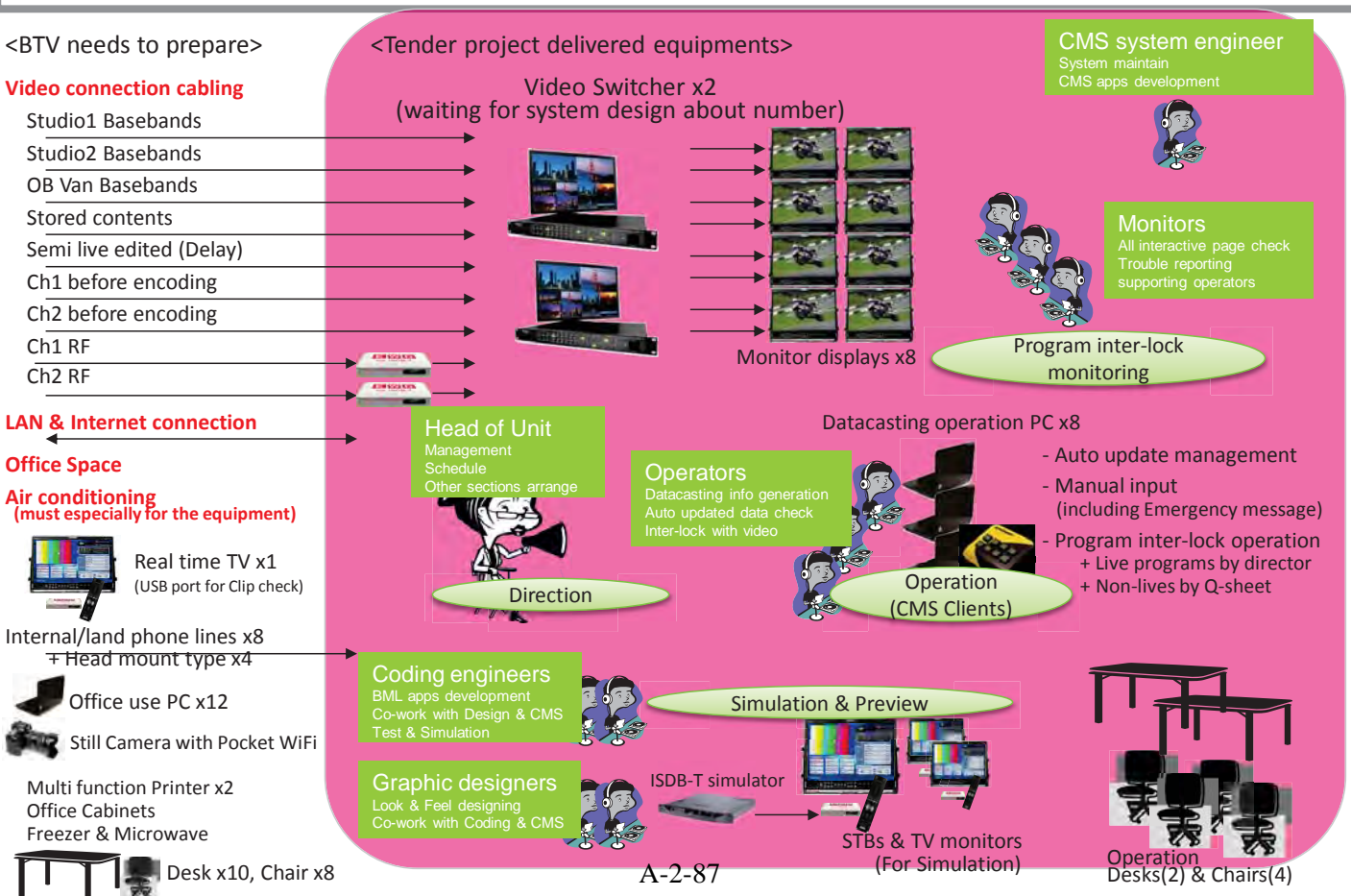# Co-Working with existing sections

Datacasting as a content based system will need to work closely with the departments in DBS/BTV that provide content. Below is a diagram explaining this office will relate with the existing content departments.

Datacasting Unit
<BTV internal partners>

Ref; Data Broadcasting Unit
Housing (Last Page)

Contents Providers side
Datacasting Unit co-work with contents closely

Programs Section ✚ 2 operators from Datacasting Unit

Tasks
➤ Planning Datacasting service together
➤ Inter-locking operation together
➤ Copy-right management together

In-house Programs
- Talk Show & Magazine
- Entertainment
- Children & Youth
- Special Event
- Commissioning (Acquisition)

News Section
Tasks
➤ Planning news & current affairs

✚ 2 operators from Datacasting Unit

Sports Section
Tasks
➤ Planning sports news

✚ 2 operators from Datacasting Unit

Service Providers side

✚ CMS engineer from Datacasting Unit

Marketing Section
Tasks
➤ Datacasting Ad planning & sales

Engineering Section
Tasks
➤ Head-End system (Mux/Enc) maintain (Co-Work with CMS engineer about Datacasting system trouble-shooting)
➤ Master schedule inter-lock

Operations Section
Tasks
➤ Cameras, Editors, Directors, Studios, OBs

Channel Section
Tasks
➤ Channel scheduling of Datacasting (Linked with Video programs)

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Datacasting Unit Equipment

The Datacasting Unit Office will have the necessary equipment that will help in creating the day to day datacasting contents. The equipment will be provided by Project Tender (Tomo-Digi) and some will be provided by Hitachi for the Master Control Room. Some of the equipment will be provided by DBS/BTV.

Datacasting unit office Equipments

Other room equipments At Master control room

Digital Head-End Rack room

Video/Audio Digital Head-End equipments

12 seg
Video encoding
Video Enc
Audio Enc

1 seg
Video encoding
Video Enc
Audio Enc

EWBS/CC Server

Ch1 Video
Ch1 Audio
Ch2 Video
Ch2 Audio

Switchers

Multiplexer

To Transmitter

Digital Head-End system engineer

Co-working For Trouble shooting

CMS system engineer

External information live sources (Ex: Daily News)

DailyNews

Internet

Data (Ethernet cable)

Mirrored CMS Server at Japan

Datacasting Digital Head-End equipments

CMS Servers
(Main)
(Hot standby)

Packetyzers
(Main)
(Hot standby)

1+1 Hot Standby Switching

TS (ASI cable)

Other room CMS Clients

LAN
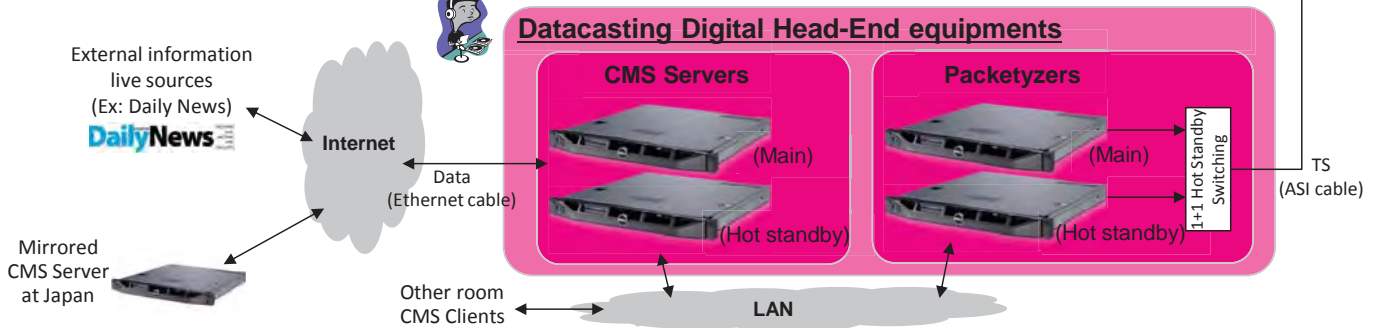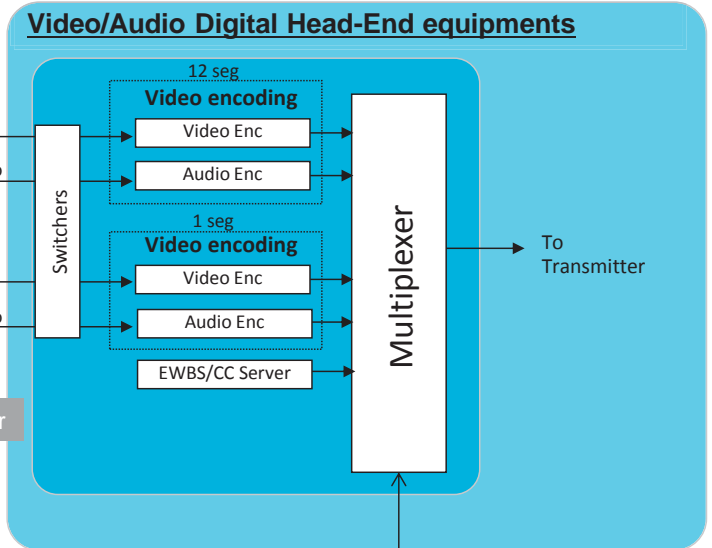
Datacasting unit office Floor plan

Below structure is showing the layout of the Datacasting Unit Office and the arrangement of the equipment to be used.

MFP

SHARP
On-Air check

CMS

CMS

Head of Unit

Still camera with WiFi x2

Laptop for outside production x2

Remote Monitor

CMS

CMS Operator

CMS Operator

CMS Remote Monitor

MFP

CMS

CMS

COMREX

Small rack
Trilogy
Ethernet
AV SW

Simulator work space

SIM

SIM

Omnibus

Master ctrl

ENPS

Quantel

Operators / Monitors work space

Speaker

Wall Video Monitors
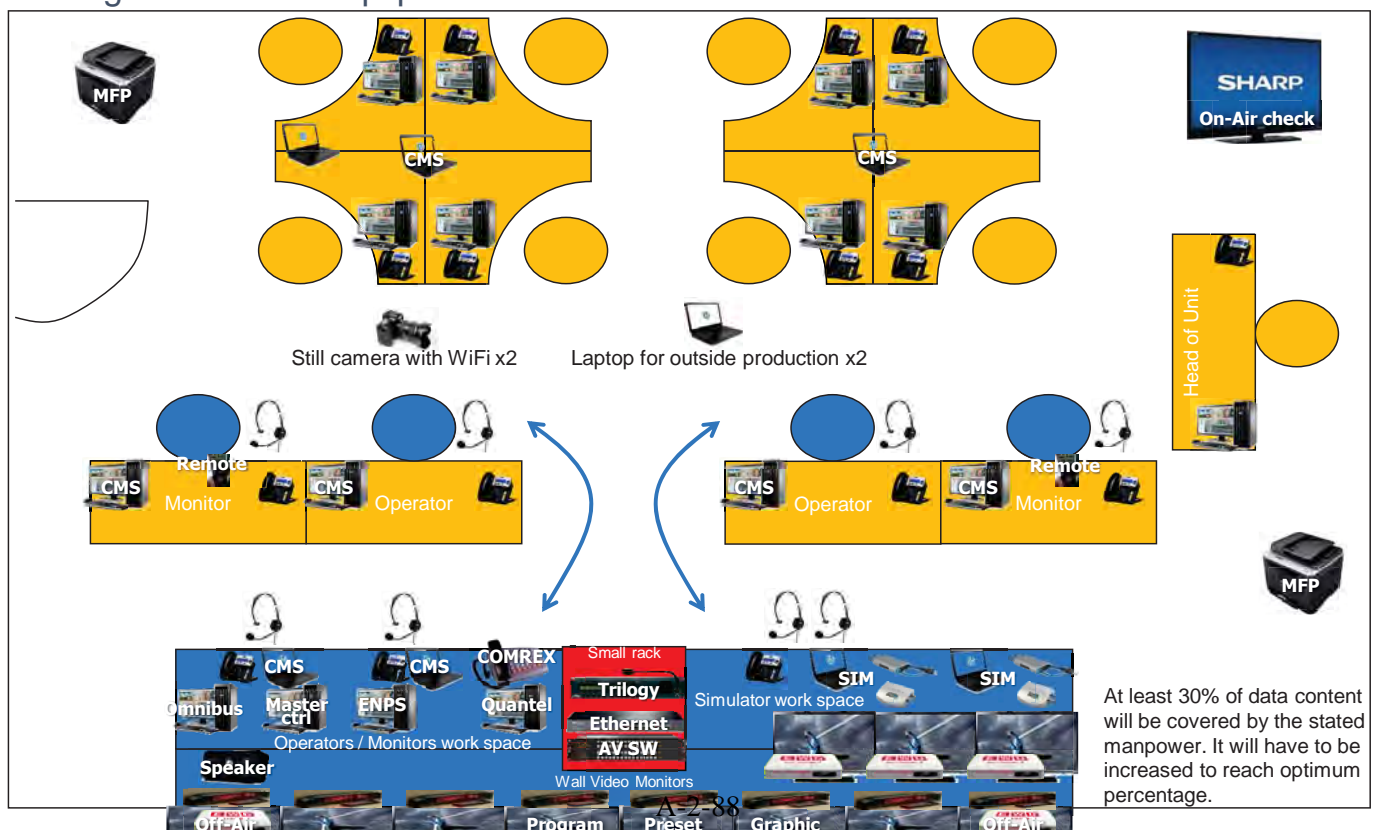
At least 30% of data content will be covered by the stated manpower. It will have to be increased to reach optimum percentage.

Off-Air

Prpgram

Preset

Graphic

Off-Air

A-2-88

Training system for data broadcasting

The objective of the training is to ensure that the Data Broadcasting WG and the Datacasting Unit Office understands and has the necessary skills and knowledge to undertake daily datacasting services.
Officers will be trained to understand the processes necessary to create datacasting contents. The training has been organised and planned with the relevant Japanese Experts (Data Broadcasting Coding and Data Broadcasting Design). Knowledge and skills will be imparted so that officers can work on their own to create contents.

The main contents are the news, sports and program schedule in a portal basis. In addition to those, Special events, Flava Dome, Silent Shout, Live & Record, Talk Back, Molemo Wa Kgang were discussed to be linked with Data broadcasting. These are the programs that the training will focus on to create contents for the official launch in June 2015.

Producing program-linked and non-linked data broadcasting contents

Data broadcasting will produce two types of datacasting contents being program linked and non-linked contents. These contents will be produced for the official launch in June 2015, these are contents related to the video stream and those not related to the video stream. However for the first official launch only contents from DBS/BTV will be used because it will be easier to access the information (data source). Also several programs have been chosen to pioneer the launch of digital migration in Botswana

The training that the Data Broadcasting will undertake will include the creation of such contents. The following is a list of the programs chosen for the first official launch.

Lists of programs to be prepared

No	Programs	Officers
1	Special Events	Torotea Mnopi
2	News & Current Affairs	Itumeleng Seviya & Onthatile Boti
3	Sports	Veronica Olivins
4	Marketing	Gosaitse Koobonye
5	Channel	Maipelo Montwedi
6	Flava Dome	Kefilwe Leero
7	Silent Shout, Live&Record	Letso Bakwena
8	Talk Back	Godiraone Motswagae
9	Molemo Wa Kgang	Patrick Morolong

Existing video program units + Datacasting
<Operation Flow: Live OB, like special events>

Datacasting Unit office

Flexible schedule changing

(4-1)
Live info
Input &
Pre-view &
On-air check

Marketing

(3)
Master
Schedule
Inter-lock

Channel Schedule

Master Monitoring

➤Real-time info input
➤Synchronized with sudden happening

(2)
Manual updating
System
Setup

Datacasting CMS
(Contents management System)

(4-2)
Real-time
Happening
sharing

Everything is here
➤Producer/Director
➤6 Cameras
➤Graphic insertion
➤Backup video clips

Master Racks (Digital Head-End)

Prepared video clips

➤TX Producer
➤TX Engineer
➤Backup video clips
➤Delay control

OB
(Special Event)

Recorded Contents

Post Production

(1)
Preparing
Template for
Event linked
pages

Production Flow

The trainees will be taught production processes. They will need to follow this process in designing and creating templates for their programs.

Training Evaluation Criteria

To measure the level of understanding, the trainees will be responsible for explaining datacasting contents to members of their sections. This way, we are able to tell if they know and understand datacasting and the purpose of the training. Thereafter one on one discussions will be done with the head of section to verify if indeed they understood and benefited from the training. A verification form will be produced to confirm.

Datacasting procedure
Program by program, Event by event, service planning

Service level Form
<Daily operation flow>
· · · · · ·
· · · · · ·
<Verification rules>
· · · · ·
· · · · ·
· · · · ·

Producer
Marketing
Graphic Designer
Head of Unit
Head of Section

Producer
Marketing
Graphic Designer
Coder

System Engineer
Network Engineer
Head of Unit
Head of Section

Datacasting Unit
Head of Section
GM

Planning
Data Aggregation

Contents
Applications
CMS
Studio Environment
Inspection

Training
Observation
Maintenance

BTV

Suggestion | Planning | Designing | Production | Verification | Operation

Tomo-Digi / Local support company

Tomo-Digi / Local support

Research
Requirements

Graphics
User Interface
Data Structure
System

Accept

Producer
Marketing
Graphic Designer
Head of Unit
Head of Section

Producer
Marketing
Graphic Designer
(Information Architect)

Head of Unit
Head of Section

Head of Unit
Head of Section
GM

Datacasting Training

On-Job Training of
Planning -> Creation -> Testing -> Verification -> Test Broadcasting

@BTV Board Room

Service planning discussion
Graphical design discussion
Data source flow discussion
Following verification flow

with 10 program producers/Supervisors

@Studio3 Room
(Temporally Datacasting operation room)

BML cording training
BML designing training

Actual Template creation
Working test with sample CMS & Simulator
After verification test broadcasting through Sebele station
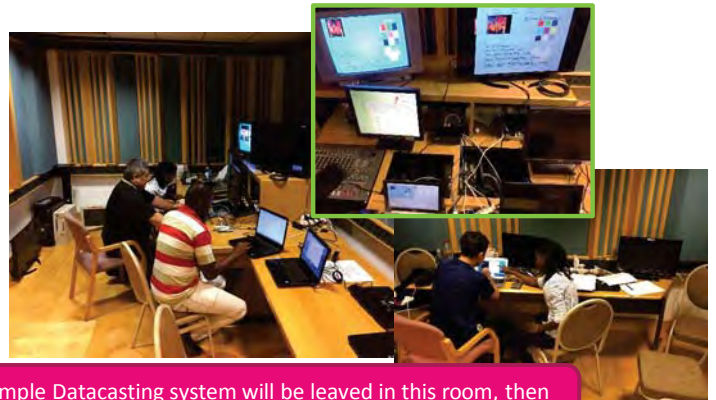
At end of training, sample Datacasting system will be leaved in this room, then BTV members can keep operating with trial broadcasting.

Demonstrating datacasting for market survey

Data Broadcasting WG was part of the market survey conducted by the Programming WG in order to come up with a program schedule for datacasting. The Data Broadcasting WG was involved in the sense that they had to explain to the public what data broadcasting is for them to be able to understand and conduct the questionnaire for the survey.

They survey was conducted at Airport Junction mall at 13-14th March 2015, where interaction was made with the public and demonstration as well as explaining what data broadcasting is. Next survey will be held at Main Mall at 20-21 March 2015.

BTV HD STUDIO OPERATIONS TRAINING (JAPAN)

SPONSORED BY JICA

Schedule

Dates:

➢ Departure: 14/02/2015

➢ Arrival in Tokyo Narita : 15/02/2015

➢ Training: 16/02/2015 to 28/02/2015

➢ Departure: 28/02/2015 to 01/03/2015

➢ Accommodation: TIC (Jica)

➢ Training Venue: Nippon TV, Shiodome

Contents

Contents	Executive Summary
	Introduction A-2-94
	Participant Reaction
	Learning
	Job Impact
	Business Impact
	Return on Training Investment
	Additional Information
	Conclusion and Recommendations
	Acknowledgements

Executive Summary

➢ Day 1; was briefings/orientation by the training coordinator.

➢ Visit to Nippon Television Network facilities,

➢ courtesy call to JICA Headquarters, address by JICA's CEO, Mr Shumoda Kiyohito.

Introduction

➢ Nippon Television Technical Resources Inc. (NiTRo), is Japan's leading expert in motion picture and multimedia broadcasting production.

➢ Nitro uses state-of-the-art multimedia technology in four main areas of expertise:

    (i)   Production Engineering (Live Broadcasting, Studio Broadcasting, ENG)

    (ii)   Post-Production (Compilation, Media Conversion, MA and CG Animation)

    (iii)   Broadcast Engineering (Operations and Management)

    (iv)   Photography (promotional photos for television programs)

Participants Reaction

BTV TEAM IN JAPAN

Team went on a two weeks hands on training at Nippon TV station in Japan.

From heat wave in Botswana into Snow in Tokyo

First day in Tokyo, Japan. Some team members experiencing snow fall for the first time.

Learning

16/02	**Orientation/General Briefing; Nippon Television - Infrastructure, Capacity, Coverage etc** **Shumoda Kiyohito – some highlights on the relationship (Technical) between JICA and BTV through their respective Governments with regard to Digital Migration.**
17/02	**Tours – editing, production & news studios, news reporting floor, media centre, signal distribution centre(SDC);** **Staff compliment – 107; Image Archive Division – raw footage is archived for a minimum of 2yrs.**
18-20/02	**Taken through – the passage from SD television to HD television(via simulcast broadcasting);** **Video engineering** **Advantage and Disadvantages of HD (small display, 4:3 aspect ratio)** - **real time graphics, vitzs software, 3 dimensional image, soft to Miya image, 4K technology** - **New HD OB van (W-2 490 mm, H-3 540 mm, L-10760 mm)**
21, 23/02	**Cultural experience – visit to the - Great Buddha** - **Hachimangu Shrine** - **Television Kanagawa, TVK**

24/02	SET operation in an HDTV environment
	- Program production, maintenance - Safety measures A-2-98
25/02	Basics of digital sound signal operation; Hands on exercises on the switcher/sound desk
26/02	Comprehensive practice Script writing – the rest of the team/crew was involved in coming up with the script; camera, sound, technical director,.

Job Impact

➢ **Planning of productions were done in details, with everyone on board.**

➢ **Time management,**

➢ **Communication**

➢ **Back up; Standby equipment**

➢ **Archiving,**

Business Impact

➢ **Human resources allocation**

➢ **Productions Planning: Scripting, Detailed floor Plans**

➢ **NO workshops: Manufacturers provide service maintenance**

➢ **Equipment handling: Cases, cable drums in studios, trolleys**

Return on Training Investment

CAMERA SWITCHER/TECHNICAL DIRECTOR

➢ Basic HD camera operation

➢ Switching/vision mixing with HD system

➢ Pre and post productions

VIDEO ENGINEERING

➢ HD video engineering adjustments.

➢ Equipment Maintenance(No workshop)

Additional Information

In order to keep pace with the digital world BTV needs the following as a matter of urgency:

➢ Basics of television program production.

➢ Responsibility of each crew member.

➢ Better methods of equipment care (handling) and storage.

➢ Buy Equipment for each Studio

➢ Signal testing (Ik tone audio, colour bars for video) prior to any production should be adopted.

Conclusion and Recommendations

CAPACITY BUILDING (Operational Staff, Tactical Managers & Strategic Leaders)

TEAM BUILDING.

Acknowledgements

Thank you to

Btv,

Nitro,

Nippon TV,

Jica,

Botswana Embassy in Japan

Nippon TV Archive Unit.

Multiple servers used to save all footage through the use of the main server and a backup .

Nippon, MCR

Officer monitoring Channel using earphones to avoid all destructions also paying attention to audio and video output. Officers switch posts to optimize concentration.

Nippon, Editing desk

Editing desk fully equipped with sound monitors and footage injection deck.

Nippon, Newsroom

News centre segmented into areas of specialization, Notice the cameraperson for the group making a presentation.

HD cameras

Cameras are numbered
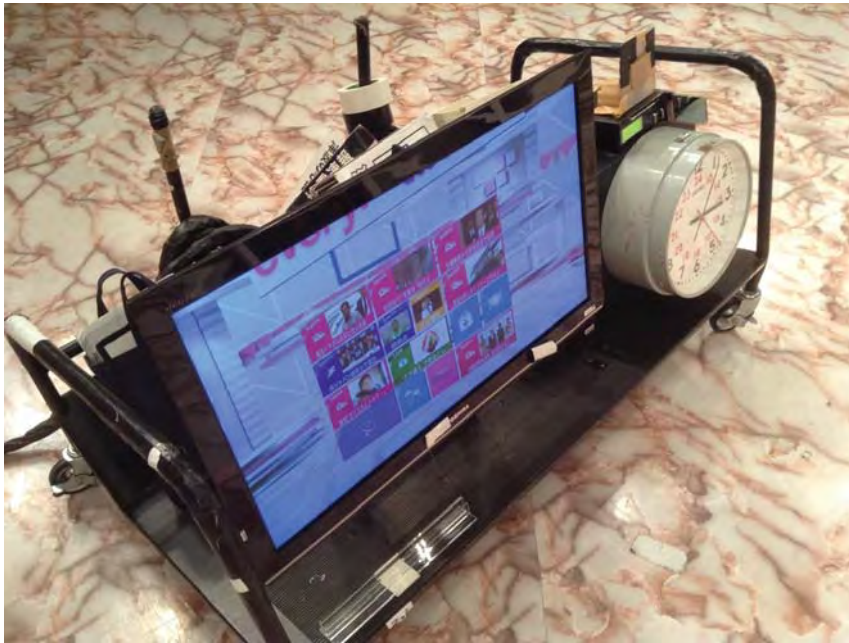
In studio Video monitors

Presenter and guests able to view video clips and keep time.

Storage shelves

Trays/trolleys to move around equipment and labels to identify it.

Implementation of the Digital Migration Project in Republic of Botswana

Second Joint Coordinating Committee

20th March, 2015

JICA Technical Cooperation Project

Content

1. JICA technical cooperation project
2. Tools to manage the Project
3. PDM version 1
4. Plan of Operation (PO)
5. PDM version 2
6. PDM indicator
7. Summary of Achievements and Activities
8. Monitoring Sheet

1. JICA Technical Cooperation Project

● **Technical Cooperation Project is a type of technical assistance by JICA**

- A project to resolve specific issues by transferring technology, knowledge and skills to the counter partners of Botswana during a certain project period

● **The Botswana side will implement the project, for which JICA provides technical support.**

- Project Director, PS
- Project Manager, DPS
- Deputy Project Manager, Mr. Calvin Goiletswe
- The leaders and members of each WG

whom Japanese experts work together.

● **JICA will provide three input elements to the project:**

- Dispatch Japanese Experts to provide technical support
- Invite personnel from the recipient country for training in Japan (or in the third country)
- Provide equipment for the Project

2. Tools to manage the Project

1. **Project Design Matrix (PDM)**

   One sheet of paper to describe overall goal, project purpose, outputs, activities and inputs and, logical relationship among them

2. **Plan of Operation (PO)**

   Indicate the schedule for each activity to take place

3. **Monitoring Sheet**

   Report the progress of each activity and problem and action to be taken

3. Version 1 of PDM

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. O or more number of programs that linked with the data broadcasting contents are produced per year. 3. O or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose			
Environment, which allows DBS to implement self-sustainably the terrestrial digital broadcasting that takes advantage of the features of ISDB-T, is ready.	1. O% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Progress Report	· Developments of DTTB network and related equipment are executed as planned. · ISDB-T receivers are penetrated to households as planned.
Outputs			
1. Various plans necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial Digital Broadcasting Station Licensing Criteria are developed. 1-5. Draft Public Relations Plan is developed. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.

Activities	Inputs		Important Assumption
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To prepare terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration	**Japanese Side** 1. JICA Experts (1) Chief Advisor/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming	**Botswana Side** 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting	2. Equipment · *Data Broadcasting Contents Management System: 1 set 3. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	**Preconditions** · Digital migration plan is not excluded from the national development plan.

4. Plan of Operation (PO)

Inputs	Year	2014 III	IV	I	2015 II	III	IV	2016 I	II	III	IV
Expert											
1. Team Leader/Broadcasting Policy & Strategy (Naoaki NAMBU)	Plan										
	Actual										
2. Deputy Team Leader/Institution/Training Plan 1 (Katsuya TERABAYASHI)	Plan										
	Actual										
3. ASO Plan/Technical Standards 1(Mr. Yoshiki MARUYAMA)	Plan										
	Actual										
4. Technical Standard 2 (Akira SAITO)	Plan										
	Actual										
5. Public Relations Plan/Training Plan 2/Coordinator (Keiko UCHIUNMI)	Plan										
	Actual										
6. HD Program Production (Chiaki MATSUMOTO)	Plan										
	Actual										
7. Data Broadcasting Contents Production (Susumu SATO)	Plan										
	Actual										
8. Data Broadcasting Coding (Toshikazu KOJIMA)	Plan										
	Actual										
9. Data Broadcasting Design (Fumitaka WATANABE)	Plan										
	Actual										
10. Data Broadcasting Programming (Masatoshi SANO)	Plan										
	Actual										
Training in Japan											
HD Studio Operations (Camera, Lighting, Audio, Video Engineering)	Plan										
	Actual										
Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	Plan	TBD									
	Actual										

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Output 1: Relative to various plans for digital migration

Activities / Sub-Activities	Year	2014 III	IV	2015 I	II	III	IV	2016 I	II	III	IV
1.1 To establish Technology and Licensing WG, Public Relations WG	Plan / Actual										
1.1.1 Define objectives, scope of work, responsibility	Plan / Actual										
1.1.2 Select members	Plan / Actual										
1.1.3 Approve	Plan / Actual										
1.2 To prepare ASO plan	Plan / Actual										
1.2.1 Learn ASO schedule and procedures	Plan / Actual										
1.2.2 Learn current status of digital migration such as preparation of transmitting stations, receivers	Plan / Actual										
1.2.3 Improve the draft and propose	Plan / Actual										
1.3 To review Botswana ISDB-T Standards	Plan / Actual										
1.3.1 Learn the draft of ISDB-T technical standards	Plan / Actual										
1.3.2 Select necessary technical standards and compare with the draft	Plan / Actual										
1.3.2 Improve the draft and propose	Plan / Actual										
1.4 To review specifications for receivers	Plan / Actual										
1.5 To prepare terrestrial broadcasting station licensing criteria	Plan / Actual										
1.5.1 Learn exsiting broadcasting license and its criteria	Plan / Actual										
1.5.2 Examine necessaery amemdment for digital migration, and prepare a draft	Plan / Actual										
1.5.3 Improve the draft and propose	Plan / Actual										
1.6 To develop draft Public Relations Plan for Digital Migration	Plan / Actual										
1.6.1 Learn the draft Public Relations Plan	Plan / Actual										
1.6.2 Analyze viewers and organization involved	Plan / Actual										
1.6.3 Prepare and Review the draft	Plan / Actual										
1.6.4 Establish an organization	Plan / Actual										
1.6.5 Implement Public Relations Plan	Plan / Actual										

Output 2: DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.

Activities / Sub-Activities	Year	2014 III	IV	2015 I	II	III	IV	2016 I	II	III	IV
2.1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group	Plan / Actual										
2.2 To develop HD program production capability	Plan / Actual										
2.2.1 Evaluate program production capability of BTV	Plan / Actual										
2.2.2 Formulate training plans and prepare training materials	Plan / Actual										
2.2.3 Conduct training（Planning、Research、Production, Evaluation）	Plan / Actual										
2.3 To establish a section that produces Data Broadcasting program	Plan / Actual										
2.3.1 Analyze the structure of DBS and BTV	Plan / Actual										
2.3.2 Examine a new organization chart, roles of each department, criteria for recruite professional staff	Plan / Actual										
2.3.3 Approve and establish a new section	Plan / Actual										
2.4 To develop a training system for producing Data broadcasting program	Plan / Actual										
2.4.1 Analyze the criteria to recruit staff and OJT methods	Plan / Actual										
2.4.2 Plan Data Broadcasting training system	Plan / Actual										
2.4.3 Approve	Plan / Actual										
2.4.4 Prepare training materials	Plan / Actual										
2.4.5 Conduct training, evaluate results and review them	Plan / Actual										
2.5 To develop programing plan of digital broadcasting, including Data Broadcasting, based on the market needs survey	Plan / Actual										
2.5.1 Conduct market survey with regard to Data Broadcasting	Plan / Actual										
2.5.2 Analyze the result of the market survey	Plan / Actual										
2.5.3 Formulate a draft of program schedule	Plan / Actual										
2.5.4 Approve	Plan / Actual										
2.5.5 Broadcast them	Plan / Actual										
2.5.6 Evaluate the result of broadcasting and review	Plan / Actual										

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	Plan / Actual
2.6 To plan and produce program-linked and non-linked Data broadcasting	Plan / Actual
2.6.1 Plan program-linked and non-linked Data broadcasting programs	Plan / Actual
2.6.2 Approve	Plan / Actual
2.6.3 Prepare templates	Plan / Actual
2.6.4 Produce program non-linked Data broadcasting programs and broadcast them	Plan / Actual
2.6.5 Review plan of program linked Data broadcasting programs and approve	Plan / Actual
2.6.6 Produce program linked Data broadcasting programs and broadcast them	Plan / Actual
2.6.7 Evaluate the result and propose points of improvement	Plan / Actual

Monitoring Plan

Year	2014		2015				2016			
	III	IV	I	II	III	IV	I	II	III	IV

Monitoring

	Plan / Actual
Joint coordinating Committee	Plan / Actual
Set up the detail plan of operation	Plan / Actual
Submission of Monitoring Sheet	Plan / Actual

Reports/Documents

	Plan / Actual
Work Plan	Plan / Actual
Deliverables of technical cooperation	Plan / Actual
1. Training materials for HD program production	Plan / Actual
2. Training material for Data broadcasting	Plan / Actual
3. Result of the market survey for Data broadcasting, including program s...	Plan / Actual
4. Data broadcasting programs that are produced and broadcasted during the course of the Project (electronic data)	Plan / Actual
5. A set of technical standards for ISDB-T	Plan / Actual
6. Public Relations Plan	Plan / Actual
Project Completion Report	Plan / Actual

Public Relations

	Plan / Actual
Broadcasting programs that are produced as a part of training	Plan / Actual
Workshop for digital migration	Plan / Actual

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose			
Environment, which allows DBS to implement self-sustainably the terrestrial digital broadcasting that takes advantage of the features of ISDB-T, is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Progress Report	· Developments of DTTB network and related equipment are executed as planned. · Developments of HD studio systems are executed as planned · ISDB-T receivers are penetrated to households as planned.
Outputs			
1. Various plans necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial Digital Broadcasting Station Licensing Criteria are developed. 1-5. Draft Public Relations Plan is developed. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.
Activities	**Inputs**		
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To **review** ~~prepare~~ terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration **1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan**	Japanese Side 1. JICA Experts (1) Chief Advisor/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming **(11) Production Engineering**	Botswana Side 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produces data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting	**2. Equipment** **· *Data Broadcasting Contents Management System: 1 set** **2**. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	**Preconditions** · Digital migration plan is not excluded from the national development plan.

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***Procurement of CMS will be determined later**

Attachment-2

	Roles	Name	2014					2015												2016								Total Botswana
			8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	
Or	Team Leader/Broadcaseting Strategy & Policy	Mr. Naoaki Nambu																									2.67
Mo	Team Leader/Broadcaseting Strategy & Policy	Mr. Naoaki Nambu																									3.00
◎	Deputy Team Leader/Institution/Training Plan1	Mr. Katsuya Terabayashi																									8.33
◎	ASO Plan/Technical Standards 1	Mr. Yoshiki Maruyama																									4.00
◎	Technical Standards 2	Mr. Akira Saito																									3.17
Or	Public Relations Plan/Training Plan 2/Coordinator	* * * *																									7.00
Mo	Public Relations Plan/Training Plan 2/Coordinator	* * * *																									9.00
	HD Program Production	* * * *																									8.83
Add	Production Engineering	* * * *																									1.00
◎	Data Broadcasting Content Production	Mr. Susumu Sato																									6.00
	Data Broadcasting Coding	* * * *																									2.00
	Data Broadcasting Design	* * * *																									2.00
	Data Broadcasting Programing	* * * *																									6.00
																										63.00
	Public Relations Plan/Training Plan 2/Coordinator	* * * *								(12)																
Report	Submission		①				②				③						④					⑤					
	Domestic （MM）																										
Total			▽ JCC			▽ JCC				▽ JCC						▽ JCC					▽ JCC					63.00
																										63.0

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6. PDM indicator

- ## Objectively Verifiable Indicators

  - ### Project Purpose (at the end of the Project)

    34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV).

    ⬆

    56.8% of household have working television according to CSO survey

    As the result of questionnaire, **59%** of people answered that Data broadcasting is very useful

    56.8% * 59%= 34%

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PDM indicator

- ## Objectively Verifiable Indicators

  - Overall Goal (3 to 5 years from the end of the Project)

  2. **20** or more number of High Definition (HD) programs are produced per year.

  Currently, **19** programs are produced by BTV annually and assuming that all will be produced in HD and take a round number.

PDM indicator

- ## Objectively Verifiable Indicators

  - Overall Goal (3 to 5 years from the end of the Project)
  3. **3** or more number of programs that linked with the data broadcasting contents are produced per year.

  The number of staff members in television production is **112** (Programmes, Operation, Sport, News and Current Affairs)

  The number of staff members planned in Data broadcasting unit **16**

  19 * 16 / 112 =2.71 take a round number 3

7. Summary of Achievements in the Past 6 months (Sep, 2014 to Mar, 2015) and Activities for the Next 6 months (Apr to Sep, 2015)

	Achievements (Sep, 2014 to Mar, 2015)	Activities (Apr to Sep, 2015)
Technology and Licensing WG	• ISDB-T Standards of Botswana was approved • ASO plan was drafted • Technical Specifications were reviewed	• Complete ASO plan • Complete technical specifications • Complete licensing criteria
Public Relations WG	• Conducted the Mall events • Publicized advertisements on Daily news, the Radio, Television	• Complete draft Public relations plan and implement it accordingly, monitor public awareness campaign by the companies
HD program Production WG	• Training plan has been finalised • Producing feature news programs on Digital migration	• Produce an edutainment program that takes advantage of HD format • Broadcast them
Programing WG	• Market survey has been done	• Analyze the results and create a draft programing schedule and finalize it
Data Broadcasting WG	• Data broadcasting section was discussed and approved • Training was conducted	• Establish a unit • Establish a training system • Produce program linked and non-linked Data broadcasting programs
Training in Japan	• HD studio training in Japan has been completed	• Digital Terrestrial Television Broadcasting (DTTB) Training (including Data broadcasting) will be planned

8. Monitoring Sheet

I. Summary

1 Progress

2 Delay of Work Schedule and/or Problems (if any)

3 Modification of the Project Implementation Plan

4 Preparation of GO●● toward after completion of the Project

II. Project Monitoring Sheet I & II as Attached

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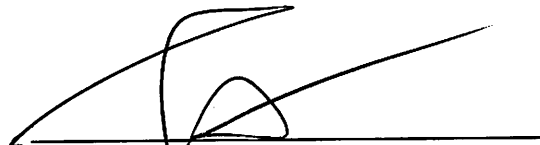
Memorandum of the 3rd JCC meeting

Memorandum

of

the Third Joint Coordinating Committee Meeting

for

the Implementation of the Digital Migration Project

in

the Republic of Botswana

(September 10, 2015)

_____

Mogomotsi Kabotamodimo
Deputy Permanent Secretary
Ministry of State President
Government of Botswana

_____

Naoaki Nambu
Team Leader
Implementation of the Digital Migration
Project in the Republic of Botswana
(DiMT Project)

Memorandum of the 3rd Joint Coordinating Committee (JCC) Meeting of the Project for Implementation of the Digital Migration Project in the Republic of Botswana (DiMT Project)

1. Date: 10th September, 2015
2. Time: 08:30-11:40
3. Venue: Cresta Riley's Hotel in Maun
4. Participants:

<Botswana side>

■ Ministry of State President
  ✧ Mr. Mogomotsi Kaboeamodimo, Deputy Permanent Secretary, Ministry of State President, Project Manager

■ Department of Broadcasting Services (DBS)
  ✧ Mr. Lesole Obonye, Director
  ✧ Ms. Bontle Mogotlhwane, General Manager, BTV
  ✧ Ms. Keitirele Mathapi, General Manager, Radio
  ✧ Mr. Kabo Dikolob, Acting General Manager, Engineering
  ✧ Mr. Calvin Goiletswe, Chief Broadcast Engineer, Deputy Project Manager, Leader of Technology and Licensing WG
  ✧ Mr. Solly Nageng, Head of Programmer, leader of HD program production WG
  ✧ Ms. Lorato Ntuara, Copy Right Administrator, leader of Public relations WG
  ✧ Ms. Salome Senome, Executive Producer, leader of Data broadcasting WG
  ✧ Mr. Joel Thuto, Head Channel Controller, leader of Programing WG
  ✧ Ms. Linet Habana, HD program production WG
  ✧ Mr. Thomas Malesela, Transmission Engineer, DBS

■ Botswana Communication Regulatory Authority (BOCRA)
  ✧ Mr. Aron Nyelesi, Deputy Director Corporate Communications
  ✧ Mr. Itumeleng Batsalelwang, Digital Terrestrial Television Expert
  ✧ Mr. Tebogo Ketshabile, Spectrum management engineer

<Japanese side>

■ Embassy of Japan
  ✧ Mr. Akio Yamamoto

■ JICA Botswana Office
  ✧ Mr. Yasuaki Aihara, Assistant Representative

■ JICA Expert Team (JET)

1

- ✦ Mr. Naoaki Nambu, Team Leader/Broadcast Policy & Strategy
- ✦ Mr. Katsuya Terabayashi, Deputy Team Leader/Institution/Training Plan 1
- ✦ Ms. Keiko Uchiumi, Public Relations Plan/Training Plan2/Coordinator
- ✦ Ms. Chiaki Matsumoto, HD Program Production
- ✦ Ms. Oreneile M Matsetse, Public Relations/Facilitator
- ✦ Mr. Kabelo Nkwane, Transmitter Engineer

5. Agenda

Time	Items		Presenter
09:30-09:45	Opening Remarks		DPS
09:45-09:50	Introduction of Participants		
09:50-10:20	Progress Report from each WG	Public Relations WG	Ms. Lorato Ntuara
10:20-10:50		Technology & Licensing WG	Mr. Calvin Goiletswe
10:50-11:10		HD Program Production WG	Mr. Solly Nageng
11:10-11:35		Programing WG	Mr. Joel Thuto
11:35-11:55		Data Broadcasting WG	Ms. Salome Senome
11:55-12:10	HEALTH BREAK		
12:10-12:45	Review of Activities and revision of PDM		Mr. Katsuya Terabayashi
12:45-13:00	AOB		
13:00-13:10	Remarks from JICA		Mr. Yasuaki Aihara
13:10-13:15	Closing Remarks		DPS

I. Discussion Note in the Third JCC Meeting

1. Opening Remarks

The DPS welcomed all and recognized the presence of JICA and Embassy of Japan to the 3rd JCC meeting which is held every six month to gauge the progress of the project and map out way forward for the remaining duration of the project. He acknowledged that a lot has happened since the last JCC meeting regarding the development of major assignments for the project.

He informed that he is aware that a lot of challenges and issues have sufficed since then and thus hoped that this meeting will address those challenges and come up with solutions that will contribute to the overall success of the project. Therefore, various working groups' leaders will be giving their presentation updates, achievements and issues about their progress in the last six months.

He informed attendants that this project is a subject of the Cabinet agenda in Parliament and thus encouraged all to give digital migration the utmost attention and effort in WGs roles to ensure success that will benefit the nation at large.

During the SADC digital migration meeting that was held in Windhoek, Namibia, it was reported that five SADC countries were said to have managed to digital switch over by the deadline date and the Set Top Boxes should generally be available in retail outlets all over the countries for people to purchase. Botswana switched on digital transmission as planned on June 2015 at the first five sites and so far progressing in phases.

2. Presentations (Progress Report)

The following presentations were made in the 3rd JCC meeting. The summaries and issues raised in each presentation are noted in this memorandum.

(1) Public Relations WG, Ms. Lorato Ntuara

- **Summary**
  1) The public relations WG gave a report of the activities carried out from April to date as the last JCC was held in March.
  2) It was reported that three companies namely Geoflux, Pego and Vertigo have been engaged on a yearlong contract individually to provide public education for Batswana about digital migration. They have been divided into three clusters according to the districts with Vertigo taking South East area, Pego under South West/North West and Geoflux assigned North East/Central.
  3) The issue of the call centre establishment is reported as it is at an advanced stage of development and expected to be functional in about six weeks. The boardroom

in mass media, ground floor has been identified as the base for the call centre.

4) The challenge faced in the WG is that they do not have answers to most of the questions posed by callers on a daily basis mostly about availability of STBs. Recommendations as the answers made were that the local companies implementing the public relations activities and the member of the WG be updated regularly to ensure correct information dissemination.

- **Comments**
  1) A comment was made that definitive timelines should be given especially with the call centre to make sure that proper monitoring of the progress can be done.
  2) It was advised that manning of the call centre should strictly be by the WG members who are employees of DBS. An explanation was given that even though the call centre is a function/task of the local companies, representation from each group will ensure effective and efficient information dissemination originating from DBS.
  3) As a way of ensuring success of the call centre, clarity of responsibilities should be established and the following were suggested as focal key areas;
     - telephone correspondence,
     - installation support including telephone consultation dispatch technician to install outer antennas and receivers, and
     - information services.
  4) A question was posed about the whether the government of Botswana had any plans to subsidies STB for people and it was confirmed that there is no plan about subsidizing STB for the people from the government due to consideration of advancement of industry by the market forces.
  5) Regarding the pilot project that was carried out, more than 100 STBs and IDTV sets have been installed at ministries and other important stakeholders. However, feedback gotten was that those who had been given the devices did not know how to use them and were thus given a user's manual.

(2) Technology and Licensing WG, Mr. Calvin Goiletswe, DBS

- **Summary**
  1) The progress of preparation of digital broadcasting network has been reported that there are about forty five transmitting stations which have been divided into four clusters and installations are being done by the supplier at the stations.
  2) Currently, five transmitting stations are in digital transmission operation and totally twenty transmitters have been installed including five operated transmitters.
  3) Details of the draft ASO plan which has been presented to the WG and the WG

have not been concluded while the tentative date for ASO is December 2016. The target ASO has not been fixed due to lack of receivers in the market, no policy provision on the STB and the service coverage is not yet known. The ASO criteria have been prepared and they has been decided that the service coverage of the population has to be 80 % of the current analogue coverage. For the penetration of receivers, DBS will go with the agreed 65 % set based on the agreement with SADC countries.

- **Comments**
  1) The draft ASO plan have been prepared by the WG, however the plan has not been authorized yet. The plan is clarified as one of Means of Verification in PDM. Thus, DBS needs to approve it as soon as possible.
  2) The ASO date, which is mentioned December 2016 in the draft, is needed to consider whether announce or not due to concerning to slow the progression of receivers penetration.
  3) Clarification on the uplink was made that it is still on schedule, there is no delay and they are scheduled to complete at the end of September.
  4) All transmission antennas at VHF sites have to be changed to UHF antennas and the rest of the antennas at the other sites will not be changed and only combiners will be installed for dual illumination.
  5) BOCRA and JET have been finalizing the technical specifications of STB and IDTV and they are expected to be agreed by end of September.

(3) HD Program Production, Mr. Solly Nageng, BTV

- **Summary**
  1) The progress of program production has been reported that the WG has produced a 15 minutes long news feature programme. In this feature the history of the concept of digital migration in Botswana, introduction of the digitalization, and the reason Botswana adopted the Japanese standard ISDB-T system have been introduced. The programme was broadcasted in June and was repeated thrice. The interviews of the representatives from the two governments Botswana and Japan as well as BOCRA were included.
  2) The WG is currently working on the second informational feature which is intending to look at the latest information post June 17, penetration effect of the public relations activities, feedback on the pilot project and the feedback from the people who are enjoying the digital broadcast.
  3) The WG is also collaborating with the Department of Forestry and Range Resources to produce several 5 minutes long edutainment programme which will be broadcasted at the end of September. The crew has filmed the veld fire drilling

in June, just completed filming a couple of the projects in Kgalagadi district and will continue filming around the country, including Maun area.

4) The technical issues of HD program production facility were raised such as HD footage storage and a HD OB van for the production of a live football game and working in collaboration with the data casting and sport section at BTV. At the moment BTV does not have a HD post-production facility, as well as an OB van in HD format, however, the initiative is ongoing to hire or acquire it for the football game.

5) Production Manuals do not exist at BTV and the staff usually learns how to produce programmes from the experience or senior staff. Therefore, proper manuals are planned to be completed by May, 2016. Materials in each step of the production that can help the members to organize their production have been prepared by JET and have been introduced to the members and how to use and apply the materials have been explained. The materials include a programme proposal sheet, a shot list, a shooting schedule, news check list, and some examples.

- **Comments**
  1) Transport has been a problem when planning for the trip for filming of the edutainment programme production and the WG hopes that next time the WG engages in another trip for the filming, DBS will assist with the transportation.

  2) On the issue of acquiring the OB van, the WG has quotations and the production has been scheduled for March which unfortunately looking at the timeline, the WG will not be able to have any HD facility. The WG is possibly looking at outsourcing it.

  3) Regarding the issue of storage, the WG is working and acquiring external hard drives to be used for storage and have already acquiring quotations.

  4) Due to the financial procedure, DBS is not able to issue the budget after March 15 in every year also the procurement of the HD OB van will be implemented in the next financial year 2016/2017. Therefore, the football game will be considered its schedule and further discussion to set the schedule will be conducted with relevant members of the WG, DBS managements and JET. The schedule affects to not only procurement or rental of HD OB van but also dispatch schedule of several Japanese experts.

(4) **Programing WG, Mr. Joel Thuto, BTV**

- **Summary**
  1) A small marketing survey was made during the public relations activities at the malls to try and understand viewing pattern and preferences of people watching

BTV and profiling.

2) The result of the survey was collected and made a report as one of the deliverables of the technical corporation project. The summary of the report was reported with challenges and recommendations on how to make use of the report for programing schedule of BTV after digital migration.

- **Comments**

    1) The WG was advised to look for business outside to market data casting advertorial space and generate more income for the television which can later be used for improvement.

    2) Additionally, the DBS has been given an assignment to go and maximize its advertising opportunity to make money that will be injected back to the system in order to grow the television.

    3) A comment was made that a lot of research has to be done before coming up with another channel while there is still a lot of struggles in operational functions with the current channel because more budget and staffs should be required for installing the transmitters and equipment and for programme productions. However, multiplexing operation as the one of the features on digital broadcasting can be considered to broadcast second programme rather than second channel for save the procurement budget.

    4) A request was made to the JET that in the trainings to include the channeling establishment and producers and directors for the programme production.

    5) This survey due to budgetary constraints covered only a small area around Gaborone and something that has never been done before but very useful information.

(5) Data Broadcasting WG, Ms. Salome Sanome

- **Summary**

    1) The current structure and operation of the data broadcasting unit has been reported as it has nine core members currently and in total twenty eight officers will be required to make the unit fully operational.

    2) The ongoing installation of equipment and preparation of facility was reported. With regard to data casting equipment, it will be completed with its installation by the end of September.

- **Comments**

    1) It is highly important to put information that is useful and accurate and spelling, English that is also correct. It might be good if the unit has some editors to check those.

2) Another possibility for the data casting is to engage people who have writing and editing skills to assist the group and make sure that information that goes is highly correct.

(6) Review of Activities and Revision of PDM, Mr. Katsuya Terabayashi

- **Summary**
  1) The objective of the review was explained by JET and the achievement of each activity was analyzed as those will achieve expected results by the end of the Project.
  2) It was examined whether the achievement of each activity will lead the Project to achieve Project Purpose.
  3) The current status of evaluation criteria for the Project was reported as to make those in higher marks by the end of the Project.

Table 6.1 Evaluation of Each Criteria

Nr	Criteria	Evaluation	Reasons
1	Relevance	High	The Project is highly relevant for both governments in terms of its development plan and aid policy.
2	Effectiveness	Need to be monitored	Though each activity is likely to achieve an expected result by the end of the Project, Project Purpose is not yet certain to be achieved. The indicator of the recognition of Data broadcasting and HD program human facility and human resources needs additional efforts to be met.
3	Efficiency	Middle	Some activities are delayed despite that the planned inputs has been done. There are some cases where the counter partners in Botswana are not available and active to the activities of the WGs.
4	Impact	Need to be monitored	It needs to be monitored what impact the achievement of activity and the project purpose have on the overall goal.
5	Sustainability	Need to be monitored	Issues such as Data broadcasting unit and the call centre need to be monitored whether they continue to expand their operations.

4) Additional activities were proposed in order to make the achievement of Project

Purpose more certain and the evaluation of the Project higher.

Table 6.2 Additional Activities

Nr	Criteria	Reasons
1	To establish a test center for appropriate receivers penetration	To facilitate the penetration of digital receivers that has Datacasting functions to contribute to the achievement of the indicator of the project purpose.
2	To develop viewers support through a call centre operation	To facilitate the penetration of digital receivers by providing detailed support to the viewers.
3	To develop procurement plan of HD studio systems	To facilitate the procurement process of HD facilities in order for those HD programmes produced in the Project to be broadcasted in HD quality.

5) The revision of PDM has been proposed based on the result of the review on the progress.

- **Comments**
    1) BOCRA also informed the delegation that the establishment of the test center will also fall into the 2016/17 financial year if it happens that it exceeds their budget.
    2) Comments was made by BOCRA that precise description of the activity with regard to the test center would be required for them to engage with the activity. It was decided that the discussion will be held with BOCRA and JET to fix the phrase.

3. AOB
- Question was raised by the leader of JET, whether BOCRA will issue the license to the broadcasting station who applied the license with DVB-T2 technology. The response was made by the delegate of BOCRA that as a regulatory authority, BOCRA is neutral in terms of technology and cannot specify the broadcasting technology. It's the responsibility of the government to say that Botswana adopted ISDB-T as its digital broadcasting standard.
- Request was made whether Japan can provide assistance with regard to the establishment of the second channel in BTV also possible extension of the Project by the time ASO takes place.
- Advice was given that a summary of the milestone reached thus far with the project be written to have a general sense of where we are with the project.

4. **Remarks from JICA**

Mr. Aihara expressed his gratitude to the delegation for their full participation during this JCC meeting and acknowledged that this time around it was very fruitful with a lot of outputs. He reminded the Botswana counterparts that Japanese experts are dispatched on a very limited time in the country therefore urged them to intensify communication with the Japanese experts and repeating such a process would enable technical transfer and foster capacity building of the Botswana counterparts. He also mentioned that he could understand the wish of the Botswana counterparts for possible extension of the project implementation period, but also said that before thinking about that, it is important for the Project team to perform as much as possible to make progress during the remaining period of implementation.

5. **Closing Remarks**

DPS conclude the JCC by encouraging each WG to dedicate them to the Project to achieve an expected result.

II. Memorandum following the third JCC Meeting

With regard to the activity of the test center, "To establish a test center for appropriate receivers" was replaced with "To establish a test center for compliance with set specifications and receivers penetration assurance" for the clarification of the activity.

BOCRA as a regulatory authority does not engage with the activity to penetrate receivers. In order to clarify the activity, the phrase was replaced and agreed on the above-mentioned phrase.

Monitoring Sheet version.3 that was prepared by the WGs and JET, presented in the JCC as summary, was confirmed to be submitted as an official report. The PDM Version.3 is agreed with among the members.

Attachment:

- PDM Version.3
- Monitoring Sheet Version.3

Project Name: Implementation of the Digital Migration Project
Period of Implementation: September 2014 to August 2016
Target Area: The Entire Country of Botswana
Implementing Agency: Department of Broadcasting Services (DBS), Ministry of State President

Target Group: Staff of DBS, BOCRA and other concerned with Implementation of the Digital Migration
Date: 10th September, 2015
Version. 3

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Monthly Report	• Developments of DTTB network and related equipment are executed as planned. • Developments of HD studio systems are executed as planned. • ISDB-T receivers are penetrated to households as planned.
Outputs 1. Various plans and systems necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial broadcasting station licensing criteria are developed. 1-5. Draft Public Relations Plan is developed. 1-6. Operation manual for the test centre is prepared. 1-7. Operation manual for the call centre is prepared. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted. 2-5. Procurement plan of HD studio systems is developed.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 1-6. Operation manual for test centre 1-7. Operation manual for call centre 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule 2-5. Procurement Plan of HD Studio Systems	• Various approval process by the concerned organizations are not delayed. • Staff received trainings does not resign DBS.

Activities	Inputs		Important Assumption
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To review terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration 1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan 1-8 To establish a test centre for compliance with set specifications and receivers penetration assurance 1-9 To develop viewers support through a call centre operation	**Japanese Side** 1. JICA Experts (1) Team Leader/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan 2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming (11) Production Engineering (12) HD Procurement Plan	**Botswana Side** 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG 2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS)	• C/P personnel continue to work on the Project. • Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting 2-7 To develop procurement plan of HD studio systems	2. Training in Japan • HD Studio Operations (Camera, Lighting, Audio, Video Engineer) • Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting) 3. Equipment Test Centre Equipment: 1 set	4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	**Preconditions** • Digital migration plan is not excluded from the national development plan.

PR Working Group

Third Joint Coordinating Committee

September, 2015

JICA Technical Cooperation Project

Content

1. Line up of activities

2. Progress

3. Additional PR activities (Pilot project and Call Centre Establishment)

4. Challenges

5. Recommendations

1. Line up of activities

1. Establishment of Public Relations WG

2. Development of Draft Public Relations Plan

3. Press Conference: 1st April, 2015

4. Gaborone Seminar: 16th April, 2015

5. Francistown Seminar: 7th May, 2015

6. World Telecommunications Day: 16th May, 2015

7. Francistown BOCCIM Fair: 27th – 31st May, 2015

8. Public Service Day: 9th July, 2015

9. Gaborone Consumer Fair: 17th 23rd August, 2015

10. Maun Seminar: 11th September, 2015

11. Call Centre Establishment

1. Line up of activities – Local Consultancies

1. Contracts Signed by all three companies on the 1st of June 2015

2. Companies are carrying out country wide publicity campaigns.

3. Pego Projects- covered Kgalagadi South and parts of Ngamiland

4. Geoflux Pty- Ltd – covered Serowe South, Central District and the North

5. Vertigo – Has done mainly Kgotla presentations in Kweneng and Kgatleng

6. Mascot, jingles, TV adverts still outstanding

2. Progress

- The PR Team has managed to sustain their weekly meetings to check progress on activities

- All planned activities in slide 2 have been carried out

- Limited memorabilia bought to be used during the seminars. (i.e. Gazebo, Banners, Pens and T-shirts etc.)

- Vehicles Stickers have been purchased and handed over to the transport manager for DBS, IS and GPPS vehicles.

- Public education by three consultancies will continue until June 2016

- The Call Centre once established will also ensure continuity of the education

3. Additional PR activities (Pilot project and Call Centre Establishment)

- Pilot project was carried out in Gaborone

Some Ministries and Private sector organizations received TV monitors and STBs to test reception of digital signals.

Public Education Team has not received any formal feed back.

- The Call centre

DBS to engage BTCL to set up the Call Centre which will be manned by agents from the three consultancies.

4. Challenges

- We don't have concrete answers for most questions being asked regarding the digital migration process. The Call Centre agents will face same problem.

(i.e. The burning questions about STBs and future plans for content development)

5. Recommendations

- The Public relations team to be updated on a regular basis by other working group leaders to enable them to update frequently asked questions.

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Thank you for your attention!

A-2-130

Technology and Licensing WG

Implementation of the Digital Migration Project
in
Republic of Botswana

3rd JCC meeting

10th September, 2015

JICA Technical Cooperation Project

Content

1. To prepare ASO Plan
2. To review ISDB-T Standards of Botswana
3. To review specifications for receivers
4. To prepare terrestrial broadcasting station licensing criteria

1. To prepare ASO plan

- DBS divided 45 transmitting stations into 4 clusters and installation works is being conducted through **Cluster 1 to 4** by supplier; four teams engaged.

- DSO will start from the transmitting stations that completed installation works first.

- Though the draft ASO plan has been presented in Technology and Licensing WG, the details has are not yet concluded. The tentative target of ASO is March, 2016 which accords with the end of public education awareness activities by the tender project.

  Note

  The target of ASO has not been fixed mainly because of the following reasons.
    – There is no commercially available receivers in the market.
    – There is no policy on the provisions of STB.
    – The service coverage is not confirmed yet.

1-1 Tentative Implementation Schedule

1-2 Transmitter installation clusters

N o	Installation Sites Cluster 1	Digital Power (Watts)	Ch
1	Sesung	750	41
2	Oliphant's Drift	125	37
3	Mahalapye	500	31
4	Serowe	500	46
5	Mmashoro	500	30
6	Francistown	500	44
7	Kasane	125	36
8	Maun	125	44
9	Ghanzi	500	25
10	Mabutsane	750	24
11	Tshabong	250	37
12	Senyamadi	500	45
13	Lobatse	500	47
14	Kanye	125	43
15	Selebi-Phikwe	1200	39
16	Gabane	2500	24

N o	Installation Sites Cluster 2	Digital Power (Watts)	Ch
1	Sojwe	500	25
2	Tshootsha	250	38
3	Ncojane	250	30
4	Hukuntsi	500	33
5	Werda	250	31
6	Middlepits	125	47
7	Bokspits	125	29
8	Mabule	125	33
9	New Xade	250	45
10	Kang	500	48
11	Charleshill	500	35

N o	Installation Sites Cluster 3	Digital Power (Watts)	Ch
1	Chadibe	500	44
2	Maope	500	28
3	Molalatau	250	21
4	Letlhakane	500	39
5	Mopipi	500	23
6	Motopi	500	
7	Sekakangwe	500	22
8	Maitengwe	125	35
9	Semowane (sowa junction)	250	28
10	Pandamatenga	125	38

N o	Installation Sites Cluster 4	Digital Power (Watts)	Ch
1	Matsitama	500	33
2	Gweta	500	24
3	Mabele	125	26
4	Sehithwa	250	26
5	Gumare	250	28
6	Sepupa	750	25
7	Ntsweseolo	250	33
8	Sebele	1250	24

Green indicates sites already installed

1-3 Transmitter Sites Map

NOTE: Red site shows VHF in Analogue

1-4 ASO Criteria

It is necessary to prepare ASO criteria by which the judgments to conduct ASO is made.

The coverage area of digital transmitter network and the penetration of receiver will be our key indicators for ASO criteria.

1. Service Coverage : 80% of analogue service area
2. Penetration of Receiver :60% of household

If each area covered by each transmitter satisfies this criteria, ASO can be realized.

2. To review ISDB-T Standards of Botswana

- Technology and Licensing WG in DiMT Project conducted discussions on ISDB-T Standards of Botswana from the beginning of the Project for almost two months based on the document made by DiBEG TF.

- With regard to EWBS, DiMT has worked with NDMO to develop the Area Code Table.

- The ISDB-T Standards document was **submitted to BOCRA on 3rd Dec, 2014 and approved on the 10th March 2015**.

- The document was then posted on the BOCRA website

- In order to improve the industries involvement on the supply of set top boxes, the specification has been posted on the local newspapers

3. To review specifications for receivers

- The Specification for receiver involve three types of receivers such as STB, IRD and Portable/Mobile.

- Those specification documents will be mainly used for type approval.

- Technical specification for STB, IRD and Portable has been discussed in the WG and minimum STB specifications has since been published on the Botswana Daily News of 11th August 2015.

- Although published, the technical committee still continues to review the STB specifications ID TV and is expected to be finalized by end of September 2015

- Draft technical specifications for Portable/Mobile receivers that conforms to ISDB-T Standards of Botswana is being communicated with BOCRA and we await the feedback.

4. To prepare terrestrial broadcasting licensing criteria

- BOCRA issued consultation paper on licensing framework and collected comments by 23rd January 2015.

- Workshop on the consultation paper has been conducted on 3rd Feb, 2015.

- The licensing framework for the commercial broadcasting stations are currently under development.

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- **Thank you.**

- **Arigato gosaimas**

- **Ke a leboga**

A-2-136

HD PROGRAM PRODUCTION WG

Implementation of the Digital Migration Project
in
Republic of Botswana

3rd JCC meeting

10th SEPTEMBER, 2015, MAUN

JICA Technical Cooperation Project

CONTENT OF PRESENTSTION

❑Purpose of the Working Group (WG)

❑ Goal of the Activities of the WG

❑ Programs to be produced

❑ Current Production

❑ Production Manual

❑ Challenges

PURPOSE

Enhance skills in HD FORMAT program production through:

✓On the job training (OJT)

✓Production of programmes for broadcasting

- ▪ Data Broadcasting

GOALS

❑Planned to deliver three programs

1. Informational Feature News
2. Edutainment Programmes
3. Live Football Game with Data Broadcasting

❑ Coordinating and collaborating with:

- ▪ Public Relations WG
- ▪ Programming WG
- ▪ Data Broadcasting WG
- ▪ Collaboration strengthen all levels of broadcasting skills and capacity at BTV

INFORMATIONAL FEATURES

❑ The FIRST News Feature:

  ✓ The first news feature has been produced and broadcasted

  ✓ Content delivered the basic information regarding to the Digital Migration in Botswana, including DTT, ISDBT and its benefits, Botswana/Japan partnership.

  ✓ Duration: 15 minutes

  ✓ Aired on 16th June 2015

  ✓ Rebroadcast: thrice

INTERVIEWS

Interview with DPS Information and Broadcasting, April 2015   **Interview with Japan Ambassador to Botswana, April 2015**

CURRENT PRODUCTION

INFORMATIONAL NEWS FEATURE 2

❑The SECOND News Feature: Pre-Production stage

Possible Content

- ✓ Latest development, information and current situation post 17th June 2015

- ✓ Extend of penetration of public education messages including PR Seminar in Maun

- ✓ Pilot broadcast project - feedback and experience

- ✓ What to expect in the near future

EDUTAINMENT PROGRAM

❑ Family friendly program

❑ Educate public about the importance of forest and effort of the government of Botswana dealing with issues of forest protection and preservation of natural resources.

❑ A series of 5-minute short programs – Broadcast by end of September
- ✓ Re-broadcast numbers of times

❑ Close collaboration with the Department of Forestry and Range Resources

❑ Filming in various locations in Botswana to show diversity of the projects of DFRR

CURRENT PRODUCTION

EDUTAINMENT PROGRAM: PRODUCTION PROCESS

❑ Filmed project: Veld fire fighting drills in Kasane – 3-5 June, 2015
❑ Tentative Filming Schedule:
  ✓ 6-9th September 2015 - Kgalagadi
    - Prevention of desertification and rehabilitation of sand dune
    - Tsabong, Khawa, Struizendam, Bokspits
  ✓ 10-13 September - North West
    - Basketry Project in Maun
    - Herbal medicines from indigenous plants in Maun
    - Morula Project for cooking oil in Sefare
  ✓ October 2015
    - Prevention of desertification in Mapoka
    - Morula Project for cooking oil in Sefare

Production Meeting with DFRR, April 2015

Filming Veld Fire Drilling in Kasane, June 2015

Filming Veld Fire Drilling in Kasane, June 2015

LIVE FOOTBALL GAME

PRODUCTION:

❑ Collaboration production of HD Program Production, Data Broadcasting WG and Sports section at BTV

❑ Football game on a wider screen and with more information

TECHNICAL ISSUES:

❑ Btv does not have an HD O.B. VAN

❑HD O.B. VAN to be out sourced for the live broadcast

PRODUCTION MANUAL

❑ There is no manual on how to produce programmes at BTV

❑JET provides reference materials to the WG members.

❑So far

- ✓Program proposal sheet
- ✓Shot list
- ✓Shooting schedule
- ✓News check list
- ✓Tips for Interview

Have been introduced to help staff to organize production.

Production manual will be printed as a booklet next year.

BTV Program Proposal Sheet

Date:

Name of Program:		Production Team	
		Producer	
Category			
		Cameraman	
Duration			

Broadcasting Date:	Re-broadcasting Date:	Re-broadcasting Date:

[Objectives of the Program]

[Contents]

[Locations]

[Note or Remarks]

Production Period:	Beginning Date:	Completion Date:	Estimate Budget:

BTV SCENE/SHOT LIST OF PROGRAM PRODUCTION (Example)

NAME OF THE PROGRAM	BTV Goes Digital: Digital Migration: Part 1
DATE OF BROADCAST	1st week of April
PRODUCERS	Kefilwe Mokgaotsane, Gail Kgomotso Gaamangwe Mathame
REPORTER	
CAMERAMAN	Ontlametse Goaothuse

SHOT TERMS:

W	Wide shot	M	Medium shot
CU	Close Up shot	HS	Headshot
LA	Low Angle	HA	High Angle
P	Pan → or ←		
TU	Tilt Up ↑	TD	Tilt down ↓

| DATE	LOCATION	SHOT	✔

13 March 2015 (Friday) 12:00~	Airport Junction
	
	Event 12:00 – 17:00
		Demonstration of Set Top Box
		• Demonstration by PR WG
		  - Setting up the booth and equipment (W, M, CU of hands, faces, etc., various shots)
		  - Demonstration by Data Broadcasting WG (W, M, CU, P, various shots)
		  - Public watching demonstration (Various shots from different angles)
		  - Interaction between WG and public (Various shots)
		• Interviews
		  - BTV Data Broadcasting WG staff (HS)
		  - Public (HS)
		
		Audience Survey
		• Survey by Programming WG
		  - Setting up (W, M, CU of hands, faces, etc., various shots)
		  - Taking surveys by Programming WG (W, M, CU, various shots)
		  - Public taking surveys (Various shots)
		  - Interaction between WG and public (Various shots from different angles)
		• Interviews
		  - BTV PR WG staff (HS)
		  - Public (HS)
		
		B-Roll
		• Exterior of the Airport Junction
		  - W or P of the mall
		  - CU of the name of the mall, if any
		• Shops, customers, @ Airport Junction – Various shots	

BTV SHOOTING SCHEDULE (Example)

NAME OF THE PROGRAM	BTV Goes Digital: Digital Migration: Part 1
DATE of BROADCAST	1st week of April
PRODUCERS	Gail Kgomotso
REPORTER	
CAMERAMAN	Ontlametse Goaothuse

DATE of SHOOTING	13 March, 2015 (Friday)
OBJECT	Demonstration of Set Top Box by Data Broadcasting + PR WB Audience Survey by Programming WG

LOCATION	Airport Junction Mall
CONTACT/COORDINATOR	Oreneile Matsetse – JICA Administration/Publicity Officer Office: 365 3219 Mobile: 73 620 616

TIME	SCHEDULE	✔
11:00	Preparation @ BTV – Load equipment	
11:30	Crew call / Leave from Media Complex – Exact location?	
	(Gail, Ontlametse, Chiaki, Katsuya)	
12:00	Arrive @ Airport Junction Mall	
	Start shooting as soon as ready	
	Demonstration of Set Top Box by Data Broadcasting WG for Public Relations WG	
	• Demonstration	
	- Setting up the booth and equipment	
	(W, M, CU of hands, faces, etc., various shots)	
	- Demonstration by PR WG	
	(W, M, CU, P, various shots)	
	- Public watching demonstration and asking some questions	
	(Various shots from different angles)	
	- Interaction between WG and public (Various shots)	
	• Interviews	
	- BTV Data Broadcasting WG staff (HS)	
	- Public (HS)	

CHALLENGES

TECHNICAL ISSUES

❑ Currently no HD post-production facility (editing system) is available at BTV and broadcast is still in SD format.

❑ Improvement of footage management
- ✓ Insufficient memory cards for all the cameras
- ✓ Insufficient storage space for archiving footage
- ✓ Loss of visual quality during down loading footage to servers

THE END

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Thank you for your attention!
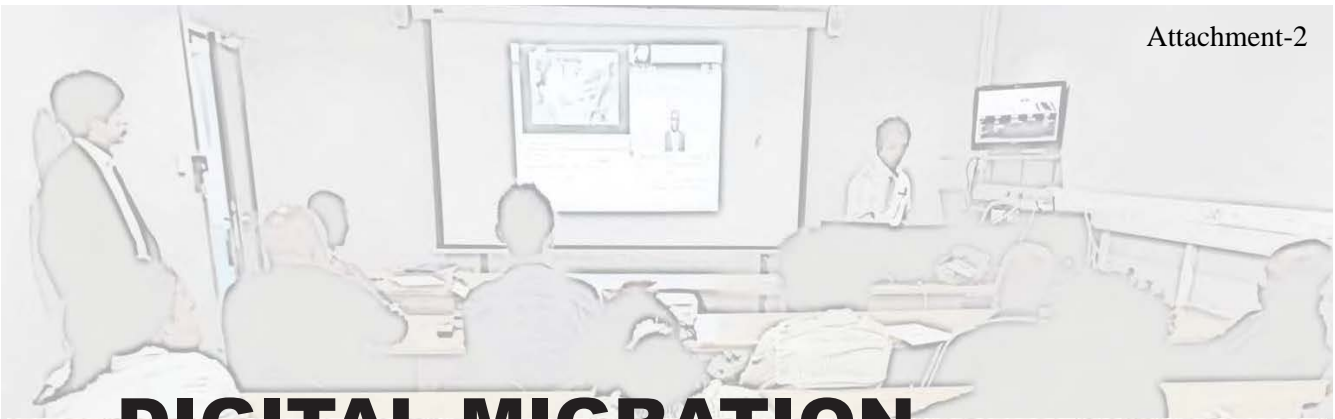
DIGITAL MIGRATION

PROGRAMMING WORKING GROUP

Mandate

- To gather information from the public that will help programming for channel.
- Survey current opinions on the current programming, preferred content.
- Information provided to guide in terms of genres, local vs. International content as well as data casting.
- Readiness for switchover

Survey

- Airport Junction (13, 14 March, 2015)
- Main Mall (20, 21 March, 2015)
- Digital Migration Seminar in Gaborone (16 April, 2015)
- Digital Migration Seminar in Francistown (7 May, 2015)
- World telecommunication day at Ghanzi (16 May,2015)

FINDINGS

QUALITY RADIO AND TELEVISION
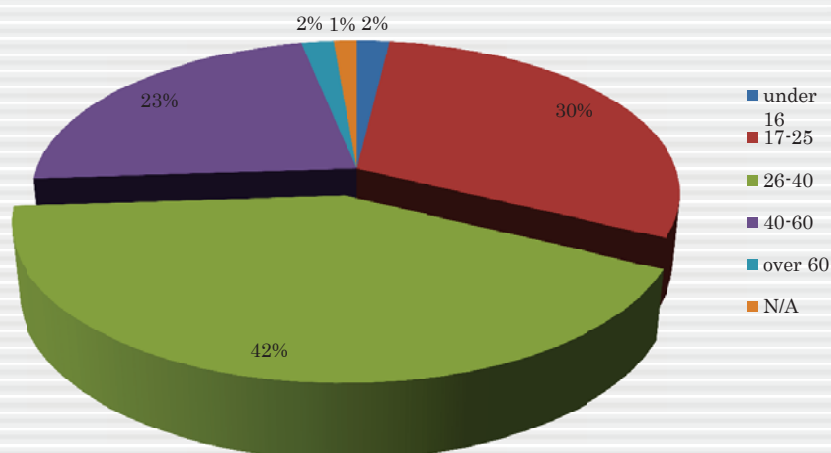
Transmission Mode

Locations

	Main Mall	Airport Junction	Francistown Seminar	Gaborone Seminar	Ghanzi
under 16	1	9	0	0	0
17-25	28	121	0	1	12
26-40	33	93	35	29	33
40-60	18	51	24	14	15
over 60	4	1	2	1	2
N/A	1	1	0	4	1

Findings

Legend:
- Government
- NGO
- Company (IT)
- Company (Others)
- University student
- Others
- N/A

Pie chart 1: 67%, 5%, 14%, 3%, 6%, 3%, 2%, 3%

Pie chart 2: Very Often 67%, sometimes 30%, Never 2%, N/A 1%
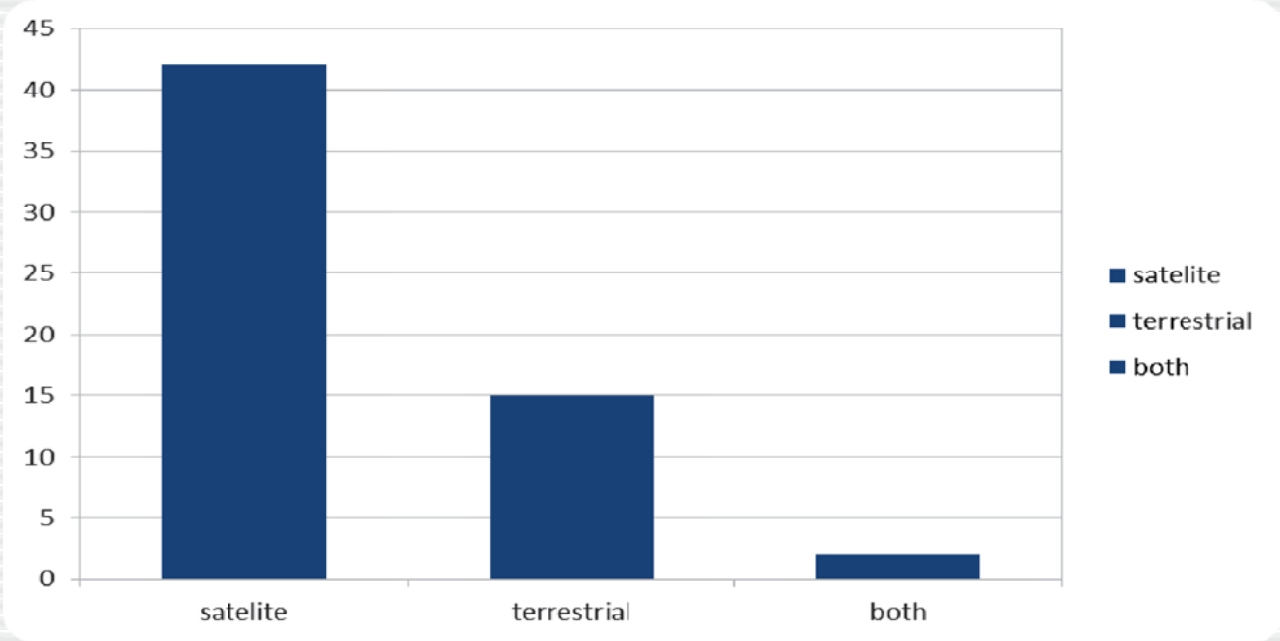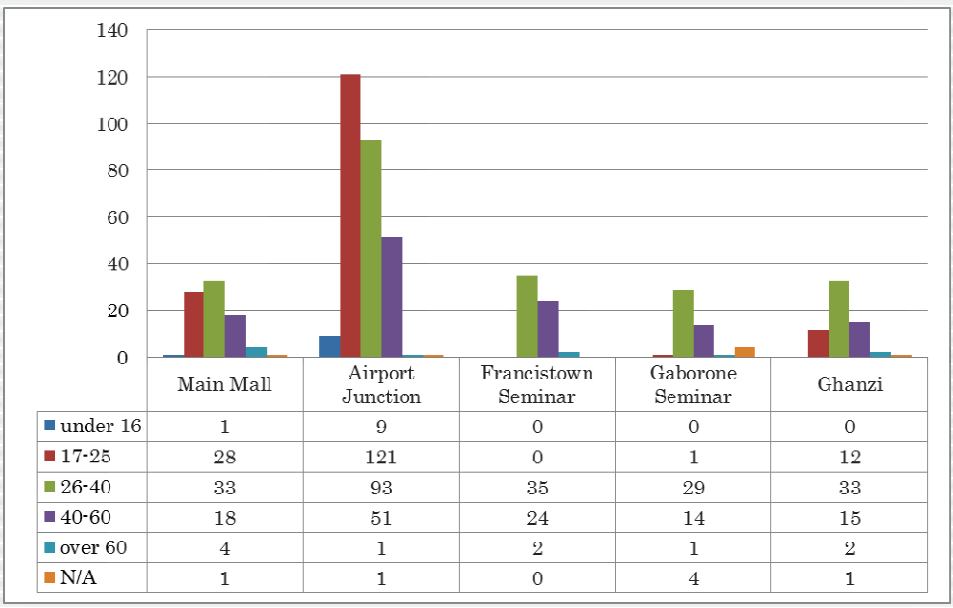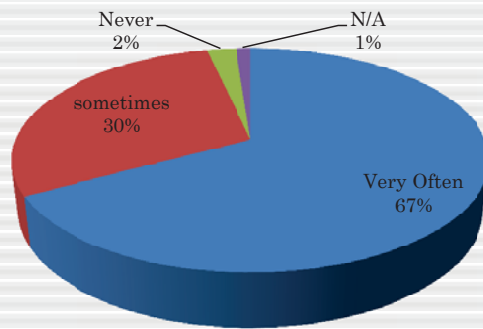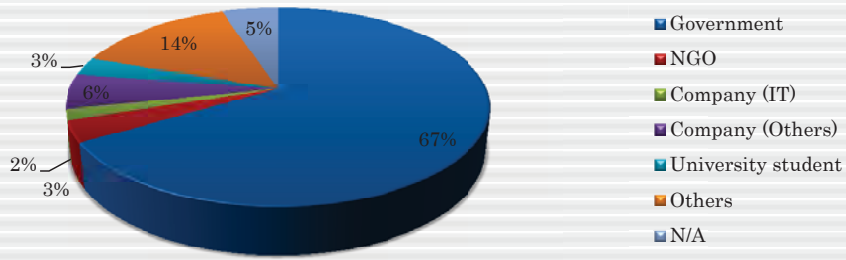
FINDING CONT..

ENVIRONMENT

Pie chart: With Family 75%, With Friend 7%, N/A 5%, Alone 13%

DAYTIME

Pie chart: evening 58%, day 25%, night 9%, N/A 3%, morning 5%

FINDING CONT…

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Rate	Sports	Drama	Music	Movie	News	Weather	Others
	33.5%	26.6%	19.1%	15.6%	68.2%	22.5%	9.2%

CONTENT

international 44%

local 40%

both 9%

N/A 7%
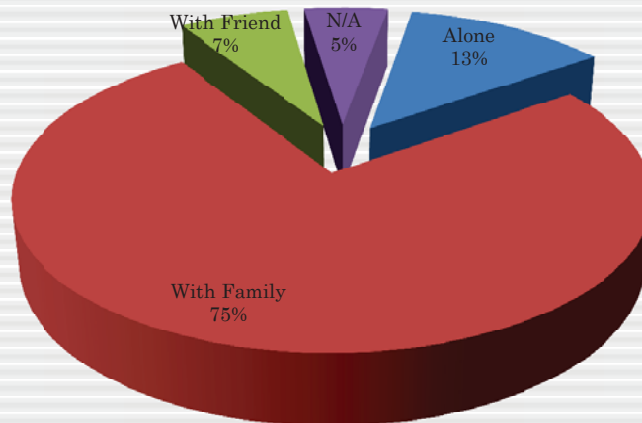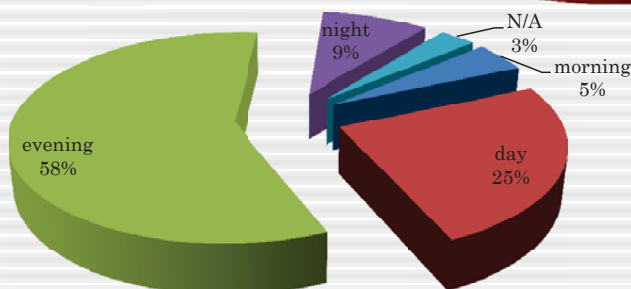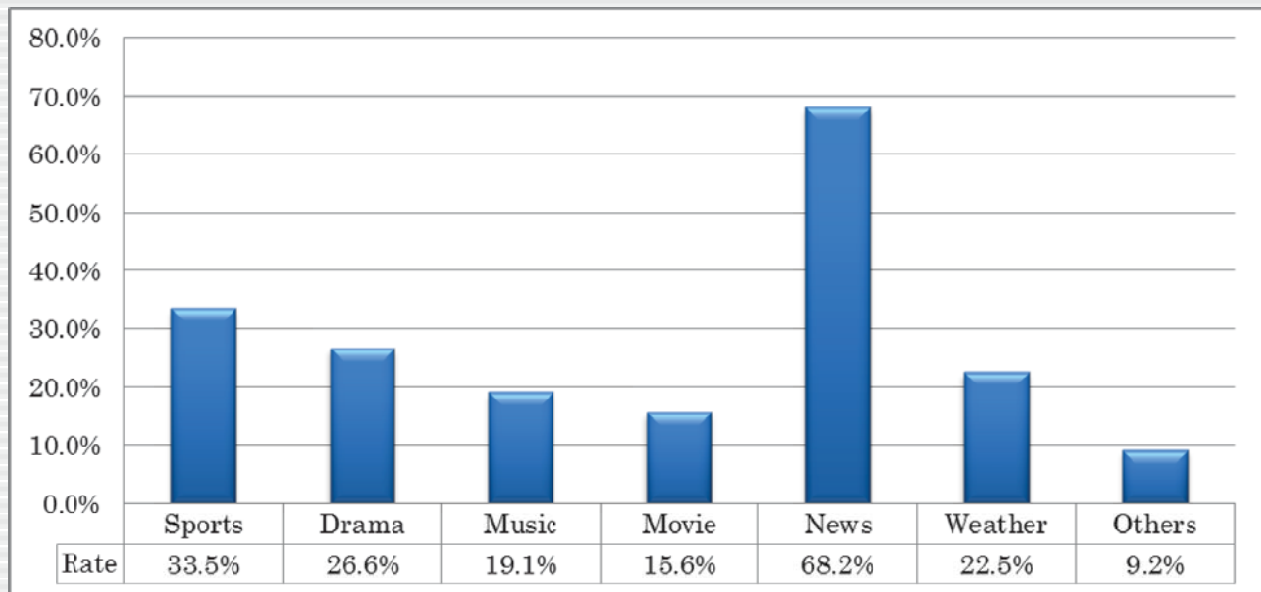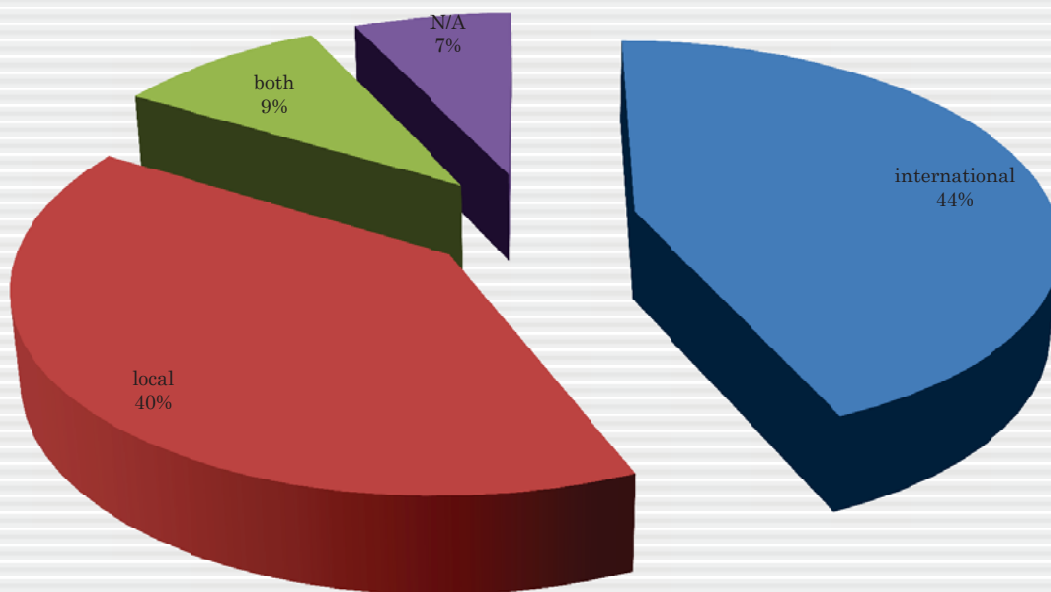
CHALLENGES

- Single Channel
- Competing Interest
- Social media platforms
- Marketing
- Content
- Resources

QUALITY RADIO AND TELEVISION

WAYFORWARD

- 72% Local Content.
- Media & Asset Management System – BCM.
- Public Private partnership – Model.
- New Channels (Sports / News).
- Optimal Utilization of Resources.
- Develop Social Media Policy.

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END

THANK YOU

QUALITY RADIO AND TELEVISION

Data Broadcasting WG

Implementation of the Digital Migration Project
in
Republic of Botswana

3rd JCC meeting
10th September, 2015
JICA Technical Cooperation Project

Table of Contents

WHAT IS DATA BROADCASTING?

It is an interactive service which broadcast data content (still pictures, images and text) to supplement the video stream. Value added services carried here include electronic program guides, weather, traffic, promotional material (adverts), stock market and any other information which may or may not be related to the programs showing on the screen).

DATA BROADCASTING WG PURPOSE

OBJECTIVES	ACTIVITIES	SCOPE OF WORK AND RESPONSIBILITY
Learn operation technology for stable Data Broadcasting and the ability to produce advanced Data Broadcasting programmes	• To establish Data Broadcasting section • To prepare Data Broadcasting programme production training system • To design and produce Data Broadcasting programs	All matters relating to the establishment of Data Broadcasting section. Programme planning production procedure and content.

DATA BROADCASTING WG MEMBERS

NO	NAME	POSITION
1	Salome Senome	Executive Producer
2	Gaone Karele	Graphics Designer
3	Gosaitse Koebonye	Marking
4	Kefilwe Leero	Producer programmes
5	Gaotsenwe Ngwako	Producer sports
6	Goitsemang Madabe	Engineering
7	Itumeleng Siviya	News and Current Affairs
8	Malebogo Babutsi	Engineer
9	Torotea Mmopi	Producer programmes
10	Beauty Sendi-Mpho	Editor
11	Bame Mogomotsi	Acquisition
12	Kaone Mosenyi	Operations
13	Maipelo Montwedi	Channel programmes

Temporary Data broadcasting Studio officers "Core member allocation"

### Nine (9) Core members operation experience

◆Salome : Head of Data broadcasting
◆Malebogo : Technical Supervisor (CMS)
◆Ngwako : Production Supervisor
◆Gaamangwe : Data Contents Manager
◆Karele : Graphic Designer Manager
◆Madabe : System Engineer Manager
◆Stella : Data Operator Manager
◆Olele : Data Operator
◆Bontlha : Data Producer

Total of 28 offices will be needed when the system is fully

CO-WORKING WITH EXISTING SECTIONS AND DEPARTMENTS

Datacasting as a content based system will work closely with other Btv Sections and government Departments that provide content. Temporary studio is set and operating.
Below is a diagram explaining data casting studio and other co-working sections.
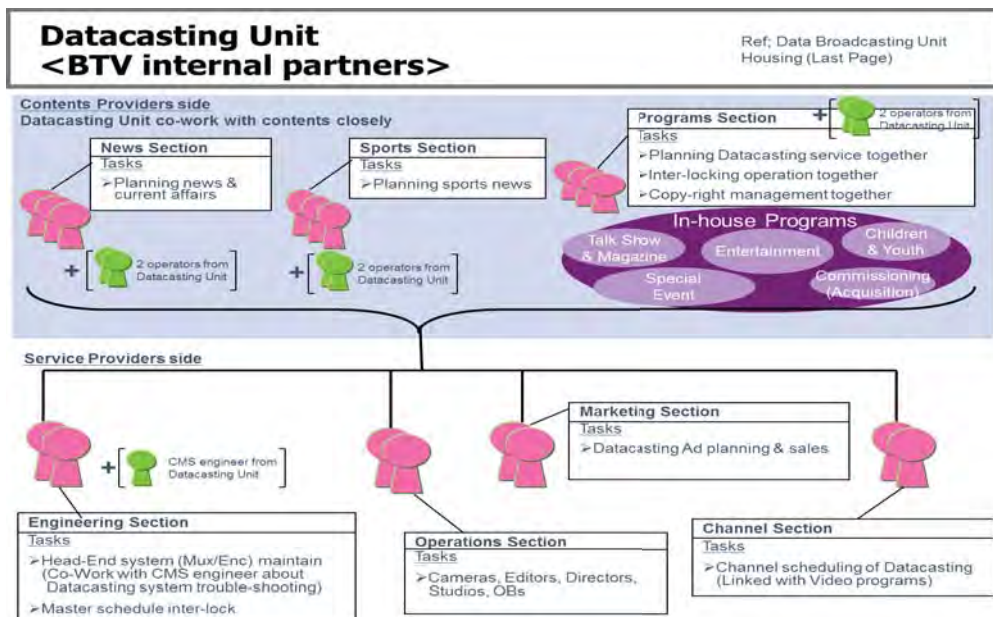
DATA BROADCASTING TRAINING IN JAPAN

The workshop was held in Tomo- Digi, Akasaka, Tokyo, Japan on the 13-24th April 2015. The workshop was organised and planned with the Japanese Experts, knowledge and skills were imparted so that officers can work on their own to create data broadcasting contents.

The objective of the workshop was to ensure that officers are equipped with the necessary skills and knowledge to undertake daily data broadcasting services and procedures.

Officers were trained to understand the processes and procedures necessary to create data broadcasting contents as follows; Service planning, Working test with sample CMS & Simulator, Data content flow, verification flow, BML coding, Graphical design, BML designing and Actual Template creation.

The outcomes of this workshop was to outline the production workflow necessary for daily operation tasks, which will be implemented with other co-working members. To come up with a consideration data broadcasting working structure of the necessary members and their roles.
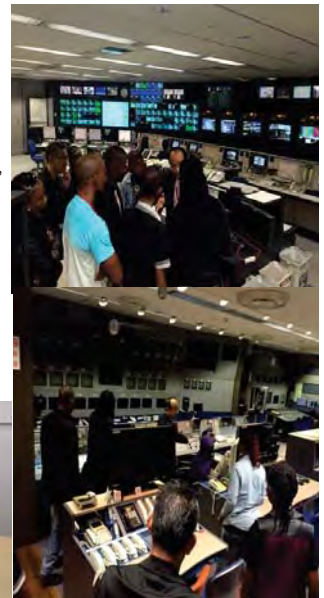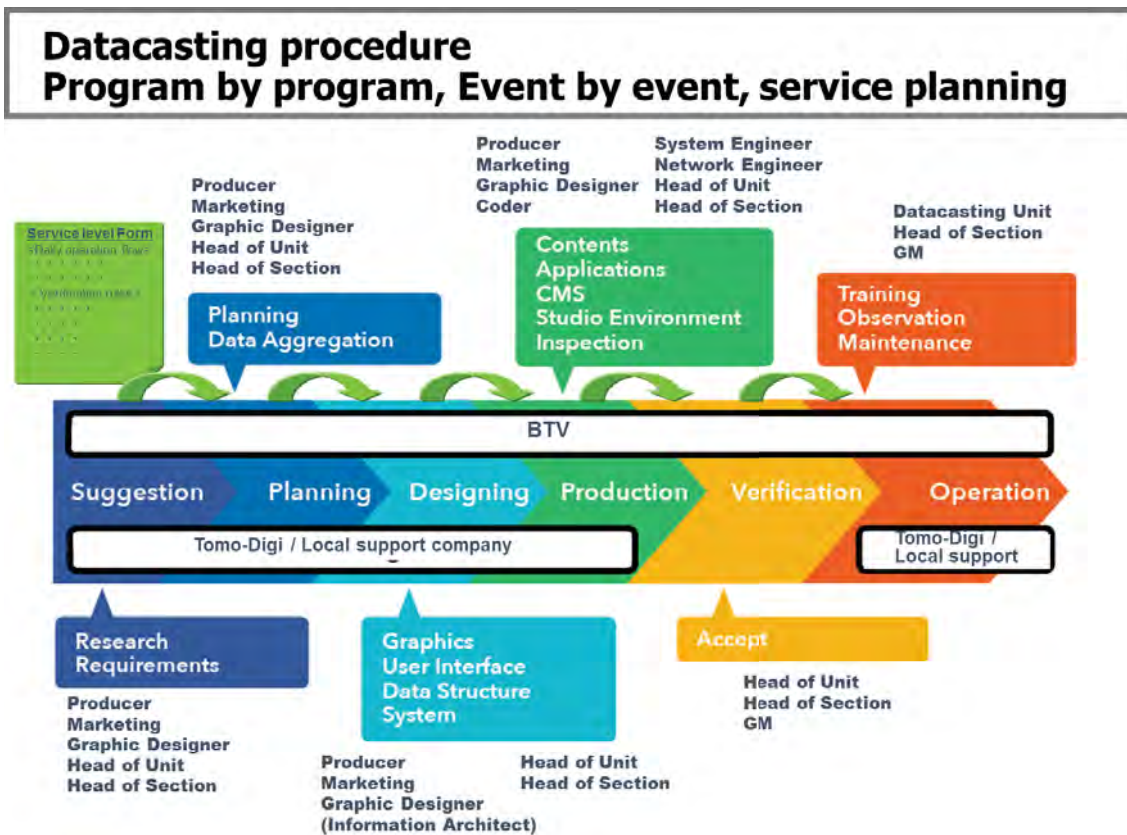
Trainees Team in Japan   Content Operation   Template Coding   Template Design   Data studio Site Viewing Japan

Datacasting procedure
Program by program, Event by event, service planning

Producer
Marketing
Graphic Designer
Head of Unit
Head of Section

Producer
Marketing
Graphic Designer
Coder

System Engineer
Network Engineer
Head of Unit
Head of Section

Datacasting Unit
Head of Section
GM

Service level Form

Planning
Data Aggregation

Contents
Applications
CMS
Studio Environment
Inspection

Training
Observation
Maintenance

BTV

Suggestion   Planning   Designing   Production   Verification   Operation

Tomo-Digi / Local support company

Tomo-Digi /
Local support

Research
Requirements

Producer
Marketing
Graphic Designer
Head of Unit
Head of Section

Graphics
User Interface
Data Structure
System

Accept

Head of Unit
Head of Section
GM

Producer
Marketing
Graphic Designer
(Information Architect)

Head of Unit
Head of Section

DATA BROADCASTING PRODUCTION WORKFLOW

The workflow is to help identify the tasks involved in data broadcasting content development, security code points, as well as how Data Broadcasting studio will work together with content providers (co-workers).
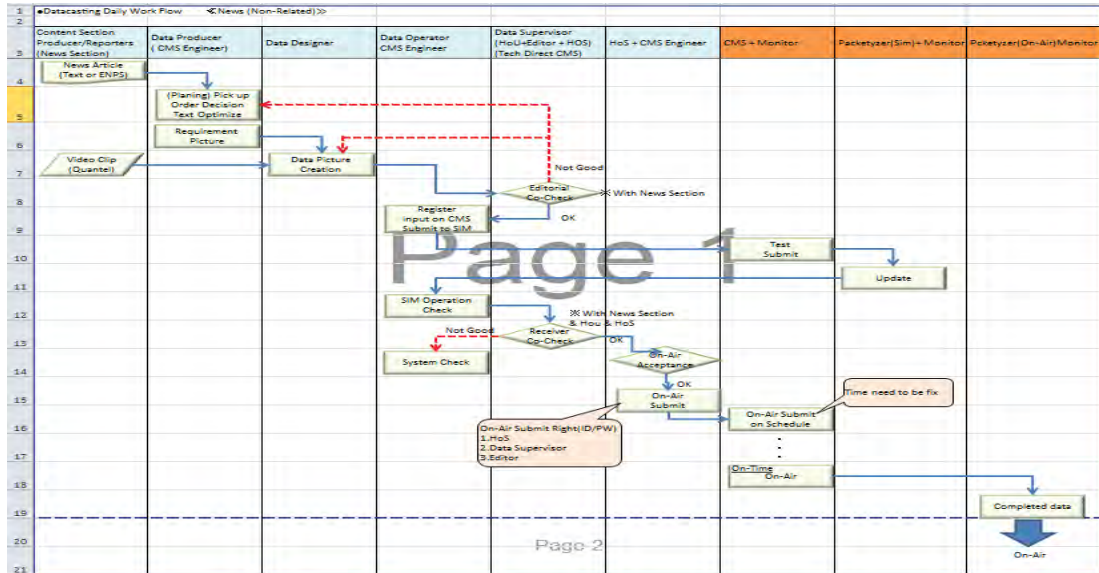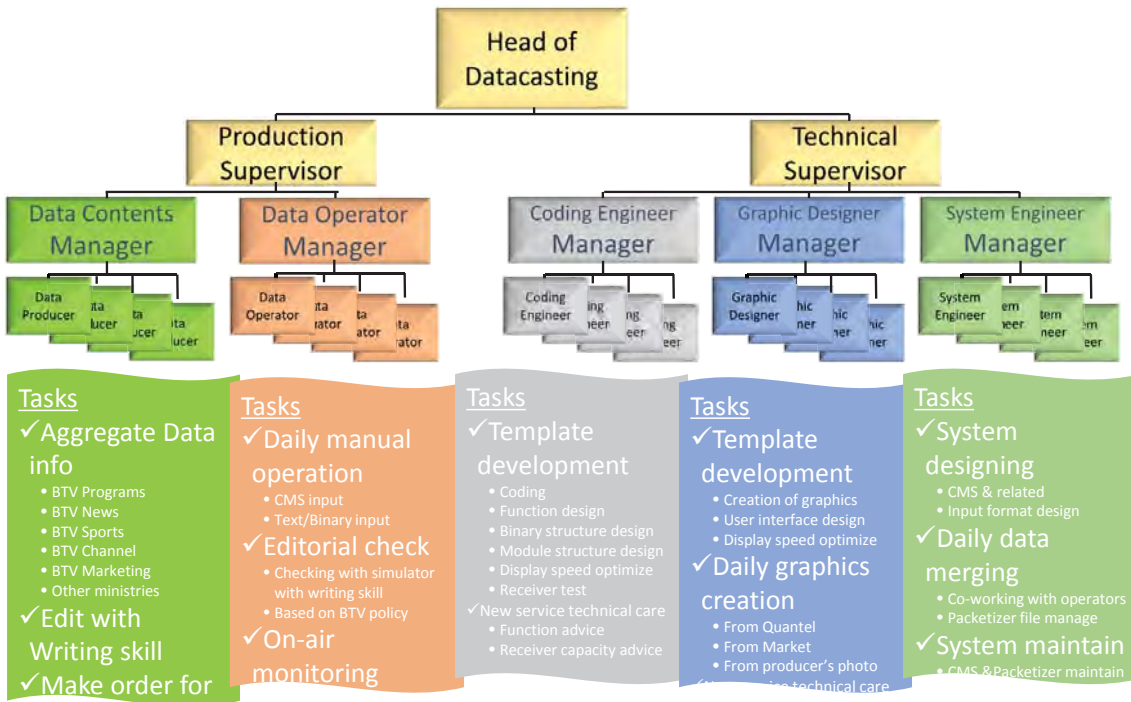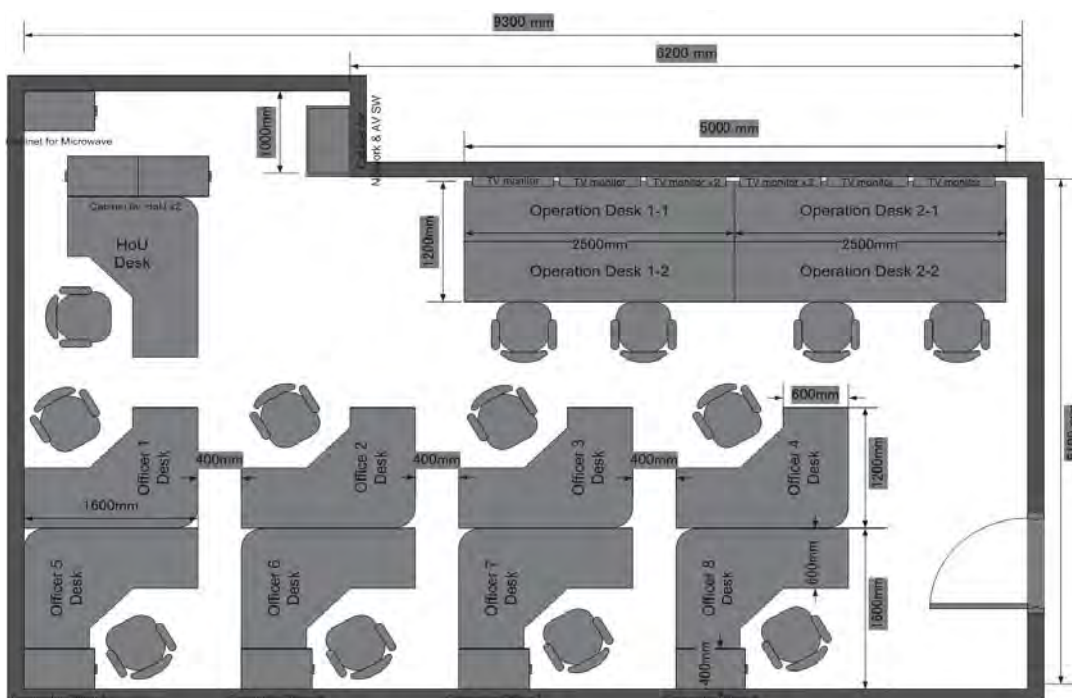

PORTAL TEMPLATE DESIGN

• During the workshop the specifications for the portal template were completed including its elements like button (focus settings, related & non-related). This gave way to the development (coding) of the rest of Btv templates creation.

Datacasting
Consideration of structure "Each Tasks"

Head of Datacasting

Production Supervisor

Technical Supervisor

Data Contents Manager

Data Operator Manager

Coding Engineer Manager

Graphic Designer Manager

System Engineer Manager

Data Producer / Data Operator / Coding Engineer / Graphic Designer / System Engineer

Tasks
✓ Aggregate Data info
  • BTV Programs
  • BTV News
  • BTV Sports
  • BTV Channel
  • BTV Marketing
  • Other ministries
✓ Edit with Writing skill
✓ Make order for

Tasks
✓ Daily manual operation
  • CMS input
  • Text/Binary input
✓ Editorial check
  • Checking with simulator with writing skill
  • Based on BTV policy
✓ On-air monitoring

Tasks
✓ Template development
  • Coding
  • Function design
  • Binary structure design
  • Module structure design
  • Display speed optimize
  • Receiver test
✓ New service technical care
  • Function advice
  • Receiver capacity advice

Tasks
✓ Template development
  • Creation of graphics
  • User interface design
  • Display speed optimize
✓ Daily graphics creation
  • From Quantel
  • From Market
  • From producer's photo
  • New service technical care

Tasks
✓ System designing
  • CMS & related
  • Input format design
✓ Daily data merging
  • Co-working with operators
  • Packetizer file manage
✓ System maintain
  • CMS &Packetizer maintain

DATA BROADCASTING STUDIO FLOOR PLAN

DATA BROADCASTING STUDIO

Data broadcasting studio is currently under development (cabling, data broadcasting equipment (monitors, computers and MCR equipment as well as office furniture) are installed. The studio is expected to be completed by end of September 2015 and operational by beginning 0ctober 2015.
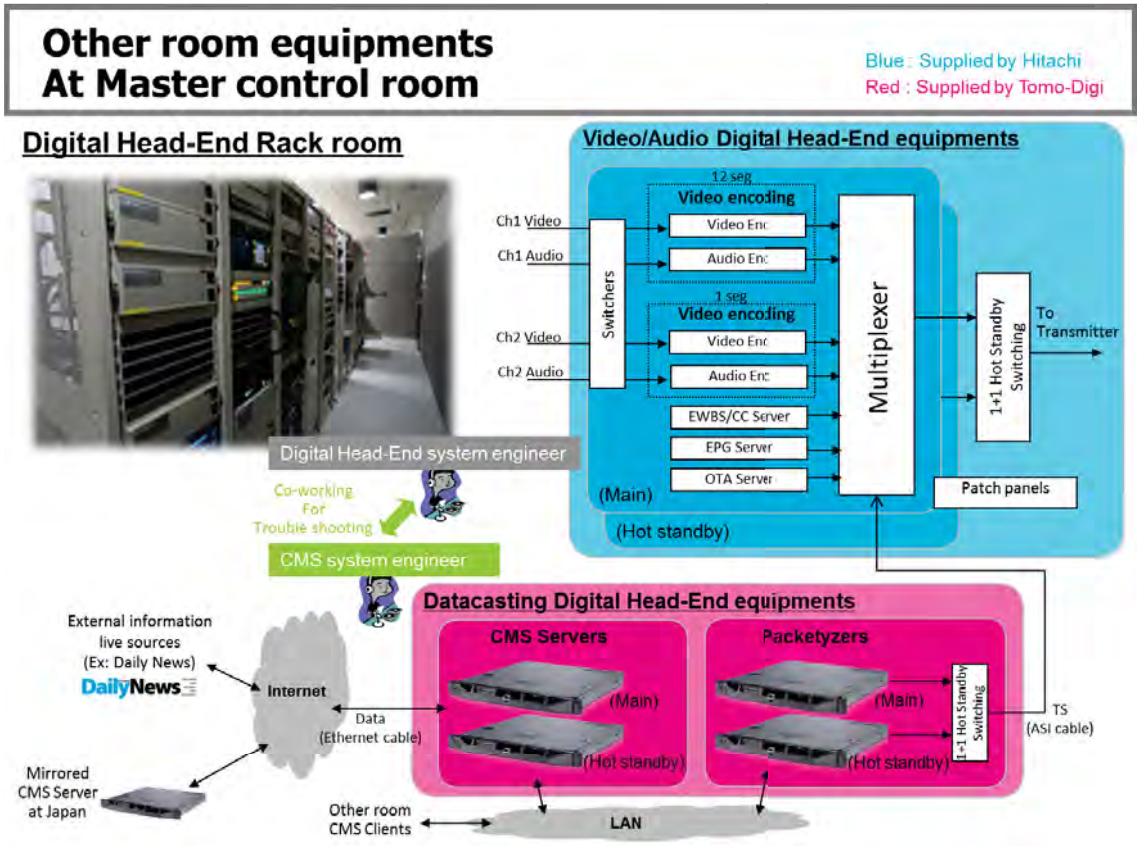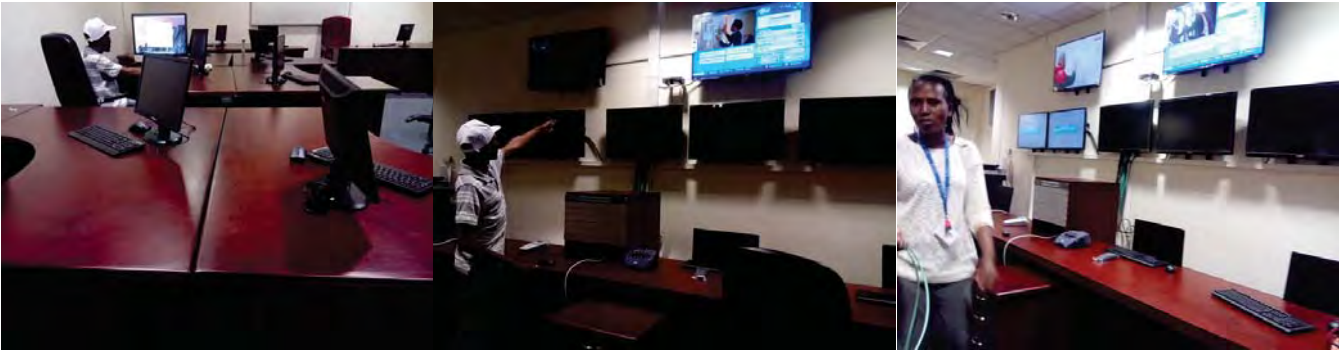
CENTRAL APPARATUS ROOM (CAR) EQUIPMENT

Equipment such as (Content Management System, Packetizer) have been installed at Btv CAR to help with the development and transmission of the datacasting contents. Other equipment is temporarily installed at Serowe and Tsabong to enable data broadcasting.

TEMPORARY DATA BROADCASTING STUDIO

A temporary studio is established for the testing of data broadcasting equipment, development and testing of data broadcasting contents. The studio is currently operating with nine (9)core members, Japanese expert and one (1) coding officer from JICA.

DATACASTING LAUNCH

Digital Migration launch was on 17th June 2015 and Data broadcasting temporary studio was used to showcase data casting contents. The following transmitters are transmitting data as well Sebele, Tsabong and Serowe. Data content is as follows; News bulletin, Btv schedule, weather, promotions and Sport (Premier league log) including series of events (**live and recorded**) e.g. Public Service Day, Police Day and President's Day.

The remaining Btv programmes will be included for data broadcasting in October 2015.
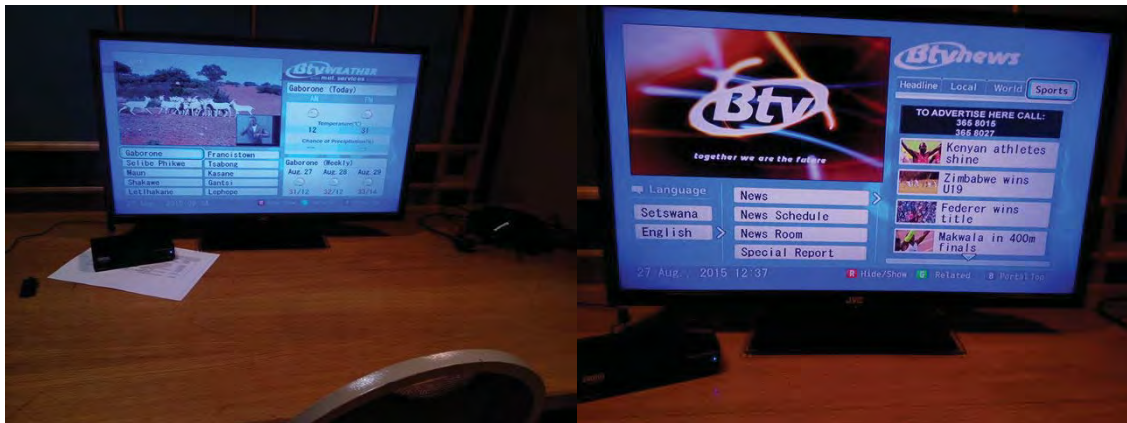
DATA BROADCASTING PUBLIC DEMOSTRATION AT CONSUMER FAIR

Data Broadcasting took part in the Consumer Trade Fair held in Gaborone at Fair Grounds on the 17-23rd August 2015, where they carried out educational demonstration on Data casting to the public. The public generally appreciated the information especially sports log content.
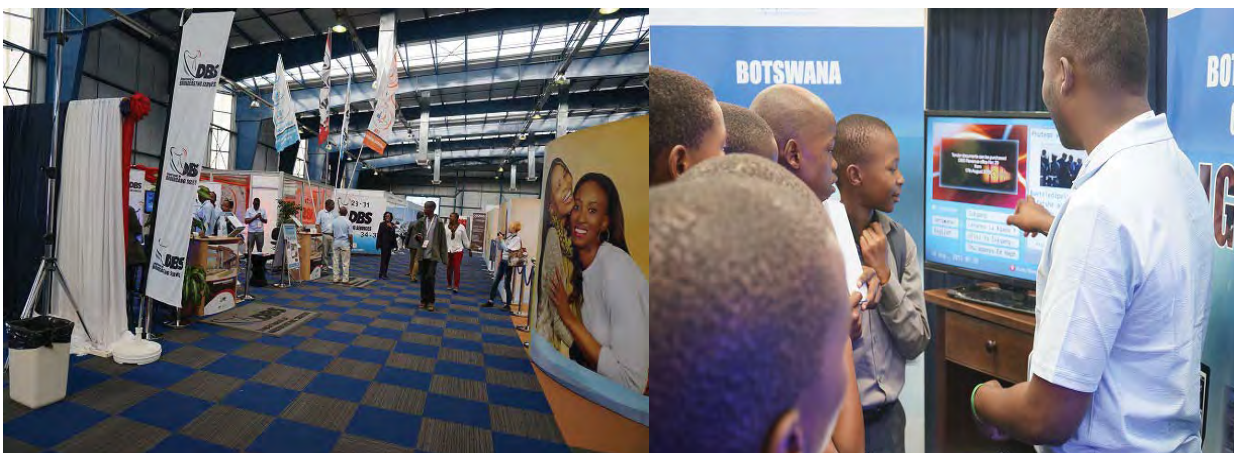
SET TOP BOX

As part of a pilot project 100 set top boxes have been installed in Gaborone at various ministries and parastatal companies, as well as in Serowe, Tsabong, Gantsi and Maun for familiarization and appreciation of the services. There are challenges experienced with transmission, set-top boxes performance, related installation and operational issues but intervention measures are done by documenting a user manual and by engaging with the project set top box manufacture to investigate the issues. Ten Thousand set top boxes are still at manufacturing stage and to be delivered end of December 2015.
DATA BROADCASTING USER_MANUAL.pdf

DIMT

Implementation of the Digital Migration Project in Republic of Botswana

Third Joint Coordinating Committee
10th September, 2015
JICA Technical Cooperation Project

DIMT

Content

1. Interim Review
2. Status of Achievement for each Activity
3. 5 Criteria for Evaluation
4. Evaluation of the Project
    (1) Relevance
    (2) Effectiveness
    (3) Efficiency
    (4) Impact
    (5) Sustainability
5. Proposed Activities and Revision of PDM

1. Interim Review

- ## Objective

  Review the content and the Status of achievement for each activity, evaluate the Project, and examine the scope of the Project for the rest of the project period.

  Start
  September
  2014

  ⚠ **3rd JCC
  10th September
  2015**

  End of the Project
  August 2016
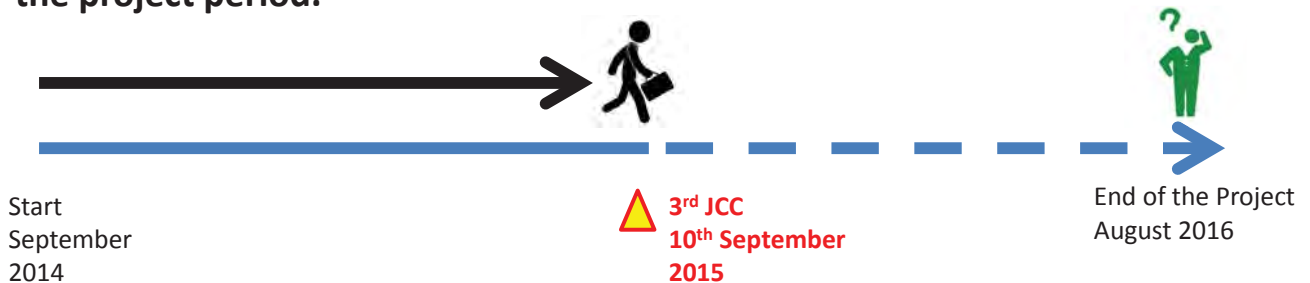
- ## Method

  PDM: PDM version.2 (agreed in 2nd JCC)

  Criteria: 5 criteria for evaluation of the Project

  Relevance, Effectiveness, Efficiency, Impact, Sustainability

Implementation of the Digital Migration Project in Republic of Botswana

(PDM Version.2)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose			
Environment, which allows DBS to implement self-sustainably the terrestrial digital broadcasting that takes advantage of the features of ISDB-T, is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Progress Report	· Developments of DTTB network and related equipment are executed as planned. · Developments of HD studio systems are executed as planned · ISDB-T receivers are penetrated to households as planned.
Outputs			
1. Various plans necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial Digital Broadcasting Station Licensing Criteria are developed. 1-5. Draft Public Relations Plan is developed. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.
Activities	**Inputs**		
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To **review** terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration **1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan**	Japanese Side 1. JICA Experts (1) Chief Advisor/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming **(11) Production Engineering** **2.** Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	Botswana Side 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG 2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produces data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting			**Preconditions** · Digital migration plan is not excluded from the national development plan.

2. Status of Achievement

Output 1: Various plans necessary for migration to digital broadcasting are developed

Objectively Verifiable Indicator	The Current Status
1-1 ASO plan is developed.	• ASO plan (draft) has been completed. ASO criteria have been set in 60% penetration of digital receiver and 80% digital broadcasting service coverage over that of analogue. The target date is set in Dec, 2016. • The issue to be addressed is to approve the draft and conduct regular survey on ASO criteria and make the DSO and ASO schedule known to the public. • At the time of ASO, DSO and when digital receivers become available in the market, it is necessary to response to the individual needs of the viewer by a call center. • Since the Project will end in August, 2016, DBS has to implement this .
1-2 Botswana ISDB-T Standard is developed.	• ISDB-T Standards of Botswana has been approved.
1-3 Specifications of receivers are prepared.	• STB and IDTV have been reached an agreement except minor changes. Mobile and Portable has to be agreed on its relevant devices and specifications. • The issue to be addressed is that technical specifications only define the minimum requirements for receivers so that how to confirm whether Data broadcasting, that is the features of ISDB-T service, can be used in that receivers and protect the viewer from those which cannot use Data broadcasting remains.
1-4 Terrestrial Digital Broadcasting Station Licensing Criteria are developed.	• BOCRA has conducted public consultation and collected comments from stakeholders and is finalizing it.
1-5 Draft Public Relations Plan is developed.	• Public relations activity is underway without public relations plan. WG has been working to produce the plan by December, 2015. Policy on the distribution of receivers and the establishment and operation of call center should be included in the plan and it is expected that all public relation activities are conducted based on the plan in a harmonized manner.

2. Status of Achievement

Output 2: DBS's capacity of producing programs including High Definition (HD) and Data broadcasting is improved.

Objectively Verifiable Indicator	The Current Status
2-1 Sections that handle data broadcasting are established in BTV.	• Data broadcasting unit has been established under Channel Control section. 7 staff members are assigned in the unit. However all of them are from other sections in BTV and hold positions in their old sections. • The issue to be addressed is to secure budgets and employ new staff members who dedicate to the work of the unit and provide necessary training to the newly recruited staff members.
2-2 HD Program Production Manual is developed.	• HD program production manual is under preparation and the outline is almost fixed. • HD program production is underway through actual program production , OJT. Special feature news has been produced and Edutainment program is being addressed . Skills and knowledge are transferred through OJT from Japanese expert and the manual is to be developed by collecting those contents of OJT. • The issue remained is that we cannot broadcast in HD quality because of the lack of HD facility
2-3 A training system for producing data broadcasting program is established.	• Training has been conducted in the Project from the planning, designing to broadcasting of Data broadcasting content. Training plan for Data broadcasting will be produced by collecting procedures from all stages of works.
2-4 Program-linked and non-linked data broadcasting contents are broadcasted.	• Program schedule based on the market survey has been drafted. • Program Non-linked Data broadcasting content has been produced in the BTV portal, BTV news, program schedule and weather and being broadcasted. Program linked Data broadcasting content has been produced in special event programs and is going to be produced in Molomo Wa Kgang, Silent Shout, Flava Dome, Talk Back and foot ball game is planned in Feb, 2016.

2. Status of Achievement

Project Purpose: Environment, which allows DBS to implement self-sustainably the
terrestrial digital broadcasting that takes advantage of the features of
ISDB-T, is ready.

Objectively Verifiable Indicator	The Current Status
1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV).	• There is no available data on the level of recognition for Data broadcasting at this moment. However given DBS places Data broadcasting as the main feature of digital migration in public relations activity. This is likely to be achieved. • If appropriate receivers that can display Data broadcasting were not penetrated to the household and put in the market, it hinders the achievement of Project Purpose.
2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T and Data broadcasting are developed.	• Data broadcasting unit has been established and its facility has been procured by tender projects. It is necessary to recruit new staff members to fully operate new services • Master Control Room, TV studio and editing system are delayed to be made to HD, program production. It hinders the achievement of Project Purpose

2. Status of Achievement

Overall Goal: Terrestrial digital broadcasting that takes advantage of the features of
Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively
available.

Objectively Verifiable Indicator	The Current Status
1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10).	• It is planned that digital service coverage will be more than 90% of that of analogue at the time of ASO and the current analogue service coverage covers more than 85% of the population. The indicator is likely to be achieved.
2. 3 or more number of programs that linked with the data broadcasting contents are produced per year.	• Data broadcasting unit has been established. It has already been planned to produce program linked data broadcasting program in the following four, Molemo Wa Kgang, Silent Shout, Flava Dome, Talk Back. The indicator is likely to be achieved.
3. 20 or more number of High Definition (HD) programs are produced per year.	• If the facility to produce HD programs is procured as planned, all the programs will be produced in HD and the indicator is likely to be achieved. • However, design and specifications of the facility is not fixed and it is not examined yet how to shift to HD in program production.

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3. 5 Criteria for Evaluation

(1) Relevance

examines the extent to which the aid activity is suited to the priorities and policies of the target group, recipient, and donor.

(2) Effectiveness

measures the extent to which a program or a project attains its objectives.

(3) Efficiency

measures the outputs in relation to the inputs to determine whether the aid uses the least costly resources possible to achieve the desired results.

(4) Impact

examines positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects.

(5) Sustainability

measures whether the benefits of the project are likely to continue after the closure of the project.

4. Evaluation of the Project

(1) Relevance: High

"examines the extent to which the Project is suited to the priorities and policies of the target group, recipient, and donor."

- **Botswana**

  Digital migration of broadcasting is prescribed in National Development Plan 10 (NDP10) and one of the means to achieve "Educated and Informed Nation" in Vision 2016

- **Japan**

  Government of Japan puts priority in 1) preparation of infrastructure for economic development and 2) social development in deprived areas in the aid policy in Botswana.

  Digital migration project is placed in the enhancement of information and communication technology infrastructure categorized in the first item.

4. Evaluation of the Project

(2) Effectiveness: Need to be monitored

"measures the extent to which a project attains its objectives"

- **Possibility to attain Project Purpose**

  Project is proceeding with achieving expected results in each activity

- **Important Assumption**

  (1) Developments of DTTB network and related equipment are executed as planned.

  Even though there is a delay in the installation work, the work has already started it is highly likely that the DTTB network is established as planned.

  (2) Developments of HD studio systems are executed as planned

  Development of HD studio system influences HD program production schedule and provision of digital migration benefits to the viewer.

  It is necessary to examine the procurement plan including MCR and TV studio.

  (3) ISDB-T receivers are penetrated to households as planned.

  As a part of promotion activities of digital receivers, it is decided to open a call center.

4. Evaluation of the Project

(3) Efficiency: Middle

"measures the outputs in relation to the inputs to determine whether the Project uses the least costly resources possible to achieve the desired results"

Input from both sides is realized as almost planned.

With regard to Output 1, there is a delay in the establishment of public relations plan.

This is because public relations plan was to include a call center and distribution of receivers, which were not planned originally.

Establishment of specifications for receivers is delayed to coordinate with the Japanese side.

With regard to Output 2, Program Schedule for digital broadcasting has been delayed because market survey cannot take place due to the delay in the spread of digital receivers.

4. Evaluation of the Project

(4) Impact: Need to be monitored

"examines positive and negative changes as a result of the project. This includes direct and indirect effects and expected and unexpected effects"

Achievement of Overall Goal "Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available" depends on operation capacity of DBS and how much the benefits of ISDB-T functions are understood by the viewer.

If the capacity of Data broadcasting unit is improved and the unit starts Data broadcasting collaborative services with other ministries and agencies and the private sector, Overall Goal is likely to be achieved.

4. Evaluation of the Project

(5) Sustainability: Need to be monitored

"measures whether the benefits of the Project are likely to continue after the closure of the Project"

Skills and knowledge

Technical Specifications only define the minimum requirements for digital receivers so that there is a possibility that digital receivers that can make use of ISDB-T functions are not distributed in the market.

Public relations activity needs to be enhanced at the time when digital receivers becomes available in the market and ASO takes place in order to response to the individual needs of the viewer.

In particular, the operation manual has to be developed in order for the call center to operate properly because ASO takes place after the completion of the Project

Since Data broadcasting is a new service, it is important to continue to have training to produce informative and attractive contents and start new services. It depends on how DBS can secure budgets to continue to provide training to the staff members.

5. Revision of PDM (Proposed)

	PDM Ver. 2	PDM Ver.3 (Proposed)
Project Purpose	Environment, which allows DBS to implement self-sustainably the terrestrial digital broadcasting that takes advantage of the features of ISDB-T, is ready	Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.
Output 1	Various plans necessary for migration to digital broadcasting are developed.	Various plans and systems necessary for migration to digital broadcasting are developed.
Activities (added)	N/A	1-8. To establish a test centre for appropriate receivers penetration 1-9. To develop viewers support through a call centre operation 2-7. To develop procurement plan of HD studio systems
Objectively Verifiable Indicators (added)	N/A	1-6. Operation manual for the test centre is prepared. 1-7. Operation manual for the call centre is prepared. 2-5.Procurement plan of HD studio systems is developed.
Means of Verification on	Project Purpose	Project Progress Report	Project Monthly Report
	Outputs (added)	N/A	1-6. Operation manual for test centre 1-7. Operation manual for call centre 2-5. Procurement Plan of HD Studio Systems
Input	JICA Experts (added)	N/A	HD Procurement Plan
	Equipment (added)	N/A	Test Centre Equipment: 1 set

(Proposed PDM Version.3)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Monthly Report	· Developments of DTTB network and related equipment are executed as planned. · Developments of HD studio systems are executed as planned. · ISDB-T receivers are penetrated to households as planned.
Outputs 1. Various plans and systems necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial broadcasting station licensing criteria are developed. 1-5. Draft Public Relations Plan is developed. 1-6. Operation manual for the test centre is prepared. 1-7. Operation manual for the call centre is prepared. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted. 2-5. Procurement plan of HD studio systems is developed.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 1-6. Operation manual for test centre 1-7. Operation manual for call centre 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule 2-5. Procurement Plan of HD Studio Systems	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.
Activities 1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To review terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration 1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan 1-8 To establish a test centre for appropriate receivers 1-9 To develop viewers support through a call centre operation 2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting 2-7 To develop procurement plan of HD studio systems	**Inputs** Japanese Side 1. JICA Experts (1) Team Leader/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan 2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming (11) Production Engineering (12) HD Procurement Plan 2. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting) 3. Equipment Test Centre Equipment: 1 set	Botswana Side 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG 2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS. **Preconditions** · Digital migration plan is not excluded from the national development plan.

5. Revision of PDM (Proposed)

● Assignment of C/P

In the past, there have been some cases where C/Ps are not available while Japanese expert are in Botswana.

The principle of JICA technical cooperation project is that C/Ps implement the Project for which Japanese experts provide supports so that for the activities to be added, we would like to make sure that C/Ps dedicate their time for the activity and work closely with Japanese experts.

In case that C/Ps are not available, please make sure that DBS assigns acting C/Ps for the activity.

Project Monitoring Sheet II (Revision of Plan of Operation)

Project Title: Implementation of the Digital Migration Project in Republic of Botswana

Inputs	Year	2014		2015				2016				Remarks
		III	IV	I	II	III	IV	I	II	III	IV	
Expert												
1. Team Leader/Broadcasting Policy & Strategy (Naoaki NAMBU)	Plan / Actual											3.67 + 2.70 M/M
2. Deputy Team Leader/Institution/Training Plan 1 (Katsuya TERABAYASHI)	Plan / Actual											8.33 + 1.50 M/M
3. ASO Plan/Technical Standards 1(Mr. Yoshiki MARUYAMA)	Plan / Actual											3.03 M/M
4. Technical Standard 2 (Akira SAITO)	Plan / Actual											3.17 + 2.00 M/M
5. Public Relations Plan/Training Plan 2/Coordinator (Keiko UCHIUNMI)	Plan / Actual											9.00 + 2.00 M/M
5. Public Relations Plan 2 (Yoshitaka Ikeda)	Plan / Actual											2.97 + 2.00 M/M
6. HD Program Production (Chiaki MATSUMOTO)	Plan / Actual											8.83 M/M
7. Data Broadcasting Contents Production (Susumu SATO)	Plan / Actual											6.00 + 0.70 M/M
8. Data Broadcasting Coding (Toshikazu KOJIMA)	Plan / Actual											2.00 M/M
9. Data Broadcasting Design (Rokuro NagataFumitaka WATANABE)	Plan / Actual											2.00 M/M
10. Data Broadcasting Programming (Masatoshi SANO, Yoshitaka Ikeda)	Plan / Actual											6.00 M/M
11. Production Engineering	Plan / Actual											1.00 M/M
12. HD Procurement Plan	Plan / Actual											3.00 M/M
Equipment												
Test Center Equipment: 1 set	Plan / Actual											
Training in Japan												
HD Studio Operations (Camera, Lighting, Audio, Video Engineering)	Plan / Actual											
Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting)	Plan / Actual											

Activities	Year	2014		2015				2016				Responsible Organization	
Sub-Activities		III	IV	I	II	III	IV	I	II	III	IV	Japan	Botswana
Output 1: Relative to various plans for digital migration													
1.8 To establish a test center for appropriate receivers penetration	Plan											JICA	BOCRA
	Actual												
1.8.1 Prepare a plan for test center establishment	Plan												
	Actual												
1.8.2 Procure office and necessary equipment	Plan												
	Actual												
1.8.3 Estalbish the test center	Plan												
	Actual												
1.8.4 Support the operation of the test center	Plan												
	Actual												
1.9 To develop viewers support through a call center operation	Plan											JICA	DBS
	Actual												
1.9.1 Examine scope of the call center operation	Plan												
	Actual												
1.9.2 Prepare a draft manual for the operation and conduct training	Plan												
	Actual												
1.9.3 Approve the manual	Plan												
	Actual												
1.9.4 Support the operation of the call center	Plan												
	Actual												
Output 2: DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.													
2.7 To develop procurement plan of HD studio systems	Plan											JICA	DBS
	Actual												
2.7.1 Understand the existing system	Plan												
	Actual												
2.7.2 Identify necessary equipment, design system and prepare cost estimation	Plan												
	Actual												
2.7.3 Prepare draft HD system procurement plan	Plan												
	Actual												
2.7.4 Approve the plan	Plan												
	Actual												

Monitoring Plan	Year	2014		2015				2016				Remarks
		III	IV	I	II	III	IV	I	II	III	IV	
Reports/Documents												
7. Operation manual for test center	Plan									▽		
	Actual											
8. Operation manual for call center	Plan									▽		
	Actual											
9. Procurement plan of HD studio systems	Plan									▽		
	Actual											
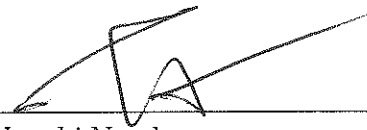
Memorandum of the 4th JCC meeting

Memorandum

of

the Fourth Joint Coordinating Committee Meeting

for

the Implementation of the Digital Migration Project

in

the Republic of Botswana

(April 22, 2016)

Mogomotsi Kaboeamodimo
Deputy Permanent Secretary
Ministry of State President
Government of Botswana

Naoaki Nambu
Team Leader
Implementation of the Digital Migration
Project in the Republic of Botswana
(DiMT Project)

Memorandum of the 4th Joint Coordinating Committee (JCC) Meeting of the Project for Implementation of the Digital Migration Project in the Republic of Botswana (DiMT Project)

1. Date: 22th April, 2016
2. Time: 07:30- 08:30
3. Venue: Room 216 Department of Broadcasting Service
4. Participants:

<Botswana side>

■ Ministry of State President
✦ Mr. Mogomotsi Kaboeamodimo, Deputy Permanent Secretary, Ministry of State President, Project Manager

■ Department of Broadcasting Services (DBS)
✦ Mr. Calvin Goiletswe, Chief Broadcast Engineer, Deputy Project Manager, Leader of Technology and Licensing WG
✦ Mr. Solly Nageng, Head of Programmer, leader of HD program production WG
✦ Ms. Salome Senome, Executive Producer, leader of Data broadcasting WG
✦ Mr. Joel Thuto, Head Channel Controller, leader of Programing WG
✦ Ms. Linet Habana, HD program production WG
✦ Mr. Thomas Malesela, Transmission Engineer, DBS
✦ Ms. Constance Kolaatamo, Broadcasting Engineer, Technology & Licensing WG

■ Botswana Communication Regulatory Authority (BOCRA)
✦ Mr. Samuel Mpaesele, Manager
✦ Mr. Tebogo Ketshabile, Spectrum management engineer

<Japanese side>

■ Embassy of Japan
✦ Mr. Akio Yamamoto

■ JICA Botswana Office
✦ Mr. Akihiko Hoshino, Residential Representative
✦ Mr. Yasuaki Aihara, Assistant Representative

■ JICA Expert Team (JET)
✦ Mr. Naoaki Nambu, Team Leader/Broadcast Policy & Strategy
✦ Mr. Katsuya Terabayashi, Deputy Team Leader/Institution/Training Plan 1
✦ Ms. Chiaki Matsumoto, HD Program Production
✦ Ms. Keiko Uchiumi, Public Relations Plan/Training Plan2/Coordinator

1

✦ Mr. Susumu Sato, Data Broadcasting Content

✦ Mr. Satoshi Hamanaka, Test Centre Operation

✦ Ms. Oreneile M Matsetse, Public Relations/Facilitator

✦ Ms. Condy Uapingena, Program production

✦ Mr. Kabelo Nkwane, Transmitter Engineer/Program Production

5. Aegnda

No	Time	Items	Presenter
1	07:30-07:40	Opening Remarks	DPS
2	07:40-07:50	PDM revision	Mr. Katsuya Terabayashi (Deputy Team Leader of JET)
3	07:50-08:10	Achievement of each activity and project purpose	
4	08:10-08:15	AOB	
5	08:15-08:20	Closing Remarks	DPS

I. Discussion Note in the Fourth JCC Meeting

1. Opening Remarks

The DPS welcomed all to the 4th JCC meeting and acknowledged the presence of JICA representatives and an observer from Japanese embassy. He highlighted that the last meeting was held in Maun in September, 2015 and apologized that his department has had a very busy and crowded days, making it difficult for some processes and tasks to be completed.

He further apologized that some of his management team will not be present for this JCC meeting due to other commitments with the Permanent Secretary for Presidential Affairs and Public Administration.

Mr, Hoshino expressed his gratitude to holding the JCC meeting and come to this point, though there period of ups and downs, and encouraged both Botswana and Japanese side to deliver the expected outputs in the rest of project period.

2. PDM Revision

Mr. Terabayashi explained two minor modifications to the PDM version. 3. One is to remove "program-linked data broadcasting" from the activity since the HD live football broadcast was postponed. The other is to include "Test centre operation" expert input from Japanese side since test centre work involves engineering work rather than documentation planned being in charge by the "Technical Standards" Expert so that the activity is more appropriate if it was supported by a practical engineer.

COMMENTS

(1) About removal of "program linked data broadcasting"

Mr. Kaboemodimo

The DPS made a comment that he appreciated the inclusion of the Test Centre Operation but explained that they would like to retain the program-linked data broadcasting that will be carried out by DBS in coming July for their presentation and documentation purposes in Botswana.

Mr Nambu

Mr Nambu explained that since all the activities conducted with the direct and indirect support from Japanese experts are included in the PDM, if DBS is committed to this activity and completes by July, it will be no problem to keep program linked data broadcasting in the activity.

Mr. Kaboemodimo

He noted to complete such activity by July.

(2) Deletion of Alternative

Mr.Kaboemodimo

The DPS proposed the deletion of the word "Alternative" for the activities which were proposed by Japanese Expert Team (JET) to provide opportunity to the C/P trainings from the experts from Nippon TV because alternative sounds a totally different activity. But the activity would be connecting to the program-linked data broadcasting for live football game scheduled in July.

Both sides agreed that program-linked data broadcasting is kept in the activity and the proposed activity is called just "Activity" rather than "Alternative activity" and agreed on one change to include "Test Centre Operation" as PDM version.4.

3. **Achievement of each activity and project purpose**

Mr. Katsuya Terabayashi explained the status of each activity by going through the progress of each activity and reminded what needs to be done to complete the activity and its due date. He further explained that indicators of project purpose are not met yet because important assumption has been materialized. If the important assumptions are cleared, the indicator will be met. Therefore at the end of the project, if we complete each activity and produce outputs, the project can be concluded with the expected outputs.

COMMENT

(1) **Progress on Licensing criteria**

Mr.Ketshabile, BOCRA

He informed all that the technical documents were approved by the BOCRA in April and the next stage is implementation which is expected in May.

(2) **Highlight of uncompleted task**

Mr. Kaboemodimo

The DPS suggested that a red background color on the presentation materials be used to indicate that a certain activity has not been done such as organization chart, program schedule.

(3) **Set Top Box**

Mr. Kaboemodimo

He commented that it is important to get adequate levels of penetration of the receivers in the market. He informed that they have done as much as possible to create a business environment in which the receivers' can be acquired, however, various suppliers who have come forward have indicated challenges influenced by decision making. Their main concern is that of suppressed demand whereby if the receivers are brought into the market, they are unable to produce accurately the uptake by households due to a number of reasons. Therefore the DPS proposed

possible assistance by the Japanese counterparts during the Joint Task Force (JTF) meeting which will be held in Japan soon by listing potential suppliers of the receivers so that they can engage with them for supplies to have the first wave of devices in June 2016.

Mr Nambu

He commented that they are working closely with the Japanese government and ask the government providing the list of potential companies for the receivers' importations even though management of such issues does not include DiMT project.

Mr. Yamamoto

He also added that the current meeting is focused on JICA project while the JTF is another scheme. Therefore the JTF is out of the scope in this meeting.

Mr. Aihara

He questioned what would be the number of set top box that DBS think it should be in Botswana.

Mr. Kaboemodimo

He did not answer exact number but referred the number of indicator for project purpose saying reasonable numbers to satisfy the indicator.

4. AOB

JET officially submitted ASO plan which was discussed in Technology and Licensing WG and approved.

5. CONCLUSION

The DPS appreciated and acknowledged the submission of the ASO plan which he indicated important item in the agenda. He expressed his gratitude to all present during this important meeting and further appreciated the efforts of the working group members. He encouraged them to take note of what still needs to be accomplished for the overall success of the project.

Mr Kaboeamodimo also thanked JICA for their continued support through the expert that continue to provide assistance in this project and acknowledged the amendments that they have jointly agreed upon. He lastly informed all present that they are particularly looking forward to the training that is going to take place in May-June so that they can increase their output in Data Broadcasting.

6. CLOSING REMARKS FROM JICA

Mr Hoshino expressed his appreciation for the collaboration of the JICA and Botswana government through this project and reminded all that this is the last lap of the project therefore encouraged his counterparts to speed up delivery of the remaining tasks.

II. Memorandum before the fourth JCC Meeting

Since the time is constrained in this fourth JCC meeting, the progress presentation from each WG has been discussed before the meeting. The contents are reviewed and summarized in the Monitoring Sheet Version .4.

Attachment:

- PDM Version.4
- Monitoring Sheet Version.4
- Presentation material
    1) JET
    2) Technology and Licensing WG
    3) Public Relations WG
    4) HD program production WG
    5) Programing WG
    6) Data Broadcasting WG

Project Name: Implementation of the Digital Migration Project
Period of Implementation: September 2014 to August 2016   **Target Group: Staff of DBS, BOCRA and other concerned with Implementation of the Digital Migration**
Target Area: The Entire Country of Botswana   **Date: 22 April 2016**
Implementing Agency: Department of Broadcasting Services (DBS), Ministry of State President   **Version. 4**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available.	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
Project Purpose			
Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Monthly Report	· Developments of DTTB network and related equipment are executed as planned. · Developments of HD studio systems are executed as planned. · ISDB-T receivers are penetrated to households as planned.
Outputs			
1. Various plans and systems necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial broadcasting station licensing criteria are developed. 1-5. Draft Public Relations Plan is developed. 1-6. Operation manual for the test centre is prepared. 1-7. Operation manual for the call centre is prepared. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted. 2-5. Procurement plan of HD studio systems is developed.	1-1 ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 1-6. Operation manual for test centre 1-7. Operation manual for call centre 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule 2-5. Procurement Plan of HD Studio Systems	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.

Activities		Inputs	
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group, Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To review terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration 1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan 1-8 To establish a test centre for appropriate receivers 1-9 To develop viewers support through a call centre operation	Japanese Side 1. JICA Experts (1) Team Leader/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan 2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming (11) Production Engineering (12) HD Procurement Plan (13) Test Centre Operation	Botswana Side 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS.
2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting 2-7 To develop procurement plan of HD studio systems	2. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting) 3. Equipment Test Centre Equipment: 1 set	2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	**Preconditions** · Digital migration plan is not excluded from the national development plan.

A-2-182

Implementation of the Digital Migration Project in Republic of Botswana

4th Joint Coordinating Committee
07:30 -08:30 / 22nd April, 2016
JICA Technical Cooperation Project

Page 1

Content

1. Revision of PDM

2. Status of Achievement for each activity

3. Status of Achievement for Project Purpose

1. Revision of PDM

DIMT   **Implementation of the Digital Migration Project in Republic of Botswana**

(Proposed PDM Version.4)

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Overall Goal			
Terrestrial digital broadcasting that takes advantage of the features of Integrated Services Digital Broadcasting-Terrestrial (ISDB-T) is effectively available	1. Terrestrial digital broadcasting service area covers 65% or more of Botswana (the target in NDP10). 2. 3 or more number of programs that linked with the data broadcasting contents are produced per year. 3. 20 or more number of High Definition (HD) programs are produced per year.	1. Radio Wave Measurement 2. Broadcasting Program Schedule 3. Broadcasting Program Schedule	
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Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV). 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Monthly Report	· Developments of DTTB network and related equipment are executed as planned. · Developments of HD studio systems are executed as planned. · ISDB-T receivers are penetrated to households as planned.
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1. Various plans and systems necessary for migration to digital broadcasting are developed. 2. DBS's capacity of producing programs including High Definition (HD) and data broadcasting is improved.	1-1. Analogue Switch Off (ASO) Plan is developed. 1-2. Botswana ISDB-T Standards is developed. 1-3. Specifications of receivers is prepared. 1-4. Terrestrial broadcasting station licensing criteria are developed. 1-5. Draft Public Relations Plan is developed. 1-6. Operation manual for the test centre is prepared. 1-7. Operation manual for the call centre is prepared. 2-1. Sections that handle data broadcasting are established in BTV. 2-2. HD Program Production Manual is developed. 2-3. A training system for producing data broadcasting program is established. 2-4. Program-linked and non-linked data are broadcasted. 2-5. Procurement plan of HD studio systems is developed.	1-1. ASO Plan 1-2. Botswana ISDB-T Standards 1-3. Specifications of receivers 1-4. Terrestrial broadcasting station licensing criteria 1-5. Draft Public Relations Plan 1-6. Operation manual for test centre 1-7. Operation manual for call centre 2-1. BTV Organization Chart 2-2. HD Program Production Manual 2-3. Training plan for data broadcasting program 2-4. Broadcasting Program Schedule 2-5. Procurement Plan of HD Studio Systems	· Various approval process by the concerned organizations are not delayed. · Staff received trainings does not resign DBS.
Activities	**Inputs**		
1. Relative to various plans for digital migration 1-1 To establish Technology and Licensing Working Group; Public Relations Working Group 1-2 To prepare ASO plan 1-3 To review Botswana ISDB-T Standards 1-4 To review specifications of receivers 1-5 To review terrestrial broadcasting station licensing criteria 1-6 To develop Draft Public Relations Plan for Digital Migration 1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan 1-8 To establish a test centre for compliance with set specifications and receivers penetration assurance; To establish a test centre for appropriate receivers 1-9 To develop viewers support through a call centre operation 2. Relative to DBS's capacity of producing programs 2-1 To establish Program Production Working Group, Programming Working Group and Data Broadcasting Working Group 2-2 To develop HD program production capability 2-3 To establish a section that produce data broadcasting program 2-4 To develop a training system for producing data broadcasting program 2-5 To develop programming plan of digital broadcasting, including data broadcasting, based on the market needs survey 2-6 To plan and produce program-linked and non-linked data broadcasting 2-7 To develop procurement plan of HD studio systems	Japanese Side 1. JICA Experts (1) Team Leader/Policy & Strategy (2) Institution/Training Plan 1 (3) ASO Plan/Technical Standards 1 (4) Technical Standards 2 (5) Public Relations Plan/Training Plan 2 (6) HD Program Production (7) Data Broadcasting Contents Production (8) Data Broadcasting Coding (9) Data Broadcasting Design (10) Data Broadcasting Programming (11) Production Engineering (12) HD Procurement Plan (13) Test Centre Operation 2. Training in Japan · HD Studio Operations (Camera, Lighting, Audio, Video Engineer) · Digital Terrestrial Television Broadcasting (DTTB) Training (including Data Broadcasting) 3. Equipment Test Centre Equipment: 1 set	Botswana Side 1. C/P Personnel (1) Project Manager (2) Deputy Project Manager (3) Leader of Technology and Licensing Working Group (WG) (4) Leader of Public Relations WG (5) Leader of Program Production WG (6) Leader of Programming WG (7) Leader of Data Broadcasting WG 2. Members of Working Groups 3. Project Office for Experts (in both BOCRA and DBS) 4. Project Vehicles: 2 cars 5. Existing BTV's facilities and equipment that can be utilized for Terrestrial Digital Broadcasting 6. All equipment that should be procured during the Implementation Period of the Technical Cooperation Project for migration to ISDB-T	· C/P personnel continue to work on the Project. · Staff received trainings does not resign DBS **Preconditions** · Digital migration plan is not excluded from the national development plan.

1. Revision of PDM

Reason: Postpone of HD football live broadcast with program linked Datacasting

Activity is planned for the purpose of supporting the HD program production technical skills

      1) Planning of live sport broadcast

      2) Common skills to shoot in HD cameras

      3) Maintenance method of HD equipment

The training takes place between 30th May – 3rd June

2. Status of Achievement for each activity

3. Status of Achievement for project purpose

PIMT   Implementation of the Digital Migration Project in Republic of Botswana

2. Status of Achievement for each activity

Output 1: Various plans necessary for migration to digital broadcasting are developed

Activity	Objectively Verifiable Indicator	Means of Verification	Achievement / Action to be taken
1-1 To establish Technology and Licensing WG, Public Relations WG	N/A	N/A	N/A
1-2 To prepare ASO plan	1-1 ASO plan is developed	1-1 ASO plan	ASO plan has been submitted
1-3 To review ISDB-T Standards of Botswana	1-2 Botswana ISDB-T Standards is developed	1-2 ISDB-T Standards of Botswana	ISDB-T Standards of Botswana has been developed and published on BOCRA's website
1-4 To review specifications of receivers	1-3 Specifications of receivers is prepared	1-3 Specifications of Receivers	Specifications of Receivers are reviewed and approved and published on BOCRA's website
1-5 To review terrestrial broadcasting licensing criteria	1-4 Terrestrial broadcasting station licensing criteria are developed	1-4 Terrestrial broadcasting licensing criteria	Public consultation has been conducted and comments are received. It was approved by BOCRA / publish in BOCRA's website
1-6 To develop Draft Public Relations Plan for Digital Migration	1-5 Draft Public Relations Plan is developed	1-5 Draft Public Relations Plan	Public relations plan has been developed and approved
1-7 To conduct public relations activities in accordance with the Draft Public Relations Plan	N/A	N/A	N/A
1-8 To establish a test centre for compliance with set specifications and receivers penetration assurance	1-6 Operation manual for the test centre is prepared	1-6 Operation manual for test center	Operation manual is underdevelopment / complete the draft by June and approve by July
1-9 To develop viewers support through a call centre operation	1-7 Operation manual for the call center is prepared	1-7 Operation manual for call center	Operation manual is underdevelopment / complete the draft by June and approve by July

Page 7

PIMT   Implementation of the Digital Migration Project in Republic of Botswana

2. Status of Achievement for each activity

Output 2: DBS's capacity of producing programs including High Definition (HD) and Data broadcasting is improved

| Activity	Objectively Verifiable Indicator	Means of Verification	Achievement / Action to be taken
2-1 To establish Program Production WG, Programming WG and Data Broadcasting WG	N/A	N/A	N/A
2-2 To develop HD program production capability	2-2 HD Program Production Manual is developed	2-2 HD Program Production Manual	The manual is underdevelopment / complete the draft and approve by May
2-3 To establish a section that produce Data broadcasting program	2-1 Sections that handle Data broadcasting are established in BTV	2-1 BTV Organization Chart	The section has been established / update the organization chart asap
2-4 To develop a training system for producing Data broadcasting program	2-3 A training system for producing Data broadcasting program is established	2-3 Training plan for Data broadcasting program	The plan is underdevelopment First draft will come out in April and approve by May
2-5 To develop programming plan of digital broadcasting, including Data broadcasting, based on the market needs survey	2-4 Program non-linked Data are broadcasted	2-4 Broadcasting Program Schedule	The schedule has been developed / form of the schedule as Data broadcasting program appears in programing schedule
2-6 To plan and produce program-non-linked Data broadcasting	N/A	N/A	News, Sports, Weather, Special events Market Flava Dome, Talk Back, Silent Shoult, Molemo Wa Kgang / submit the deliverables in July
2-7 To develop procurement plan of HD studio systems	2-5 Procurement plan of HD studio systems is developed	2-5 Procurement plan of HD studio system	The plan is underdevelopment / complete the draft by June and approve by July

Page 8

3. Status of Achievement for Project Purpose

Project Purpose

Project Purpose	Objectively Verifiable Indicator	Means of Verification	Achievement / Action to be taken
Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready	1. 34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV).	Customer Sample Survey	**8.1 %** / an item that is listed in Important Assumption for the Project, "ISDB-T receivers are penetrated to households as planned" is not met, which influences the achievement of Project Purpose Promote digital receivers so that ordinary viewer take the benefit of digital broadcasting.
	2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	Project Monthly Report	**HD broadcasting is not available yet.** / an item that is listed in Important Assumption, "Developments of HD studio systems are executed as planned" is not met, which influence the achievement of the Project purpose Upgrade studio and link systems so that digital broadcasting in HD quality is available.

3. Status of Achievement for Project Purpose
(Result of the customer sample survey)

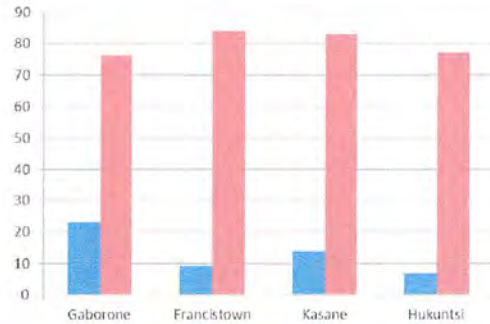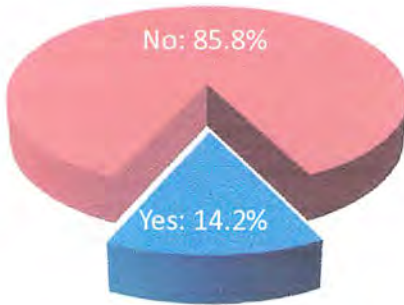**Do you know about Botswana migrating from "Analog TV" to "Digital TV"?**
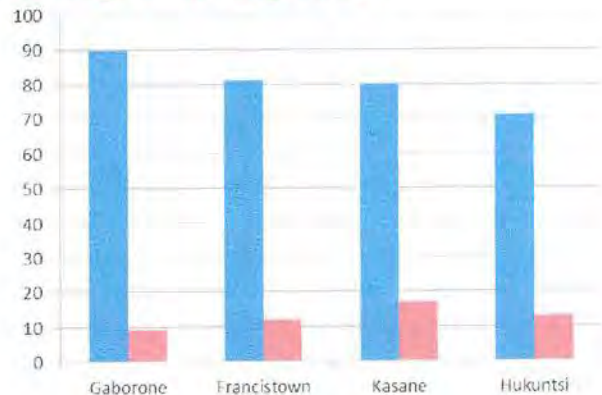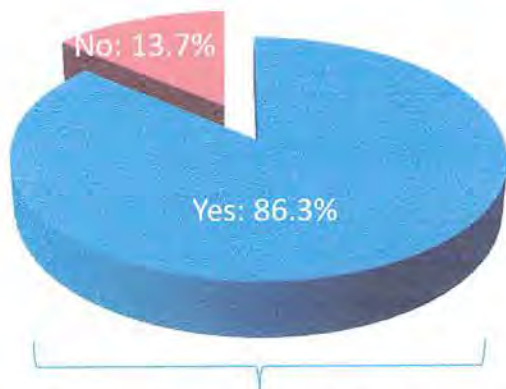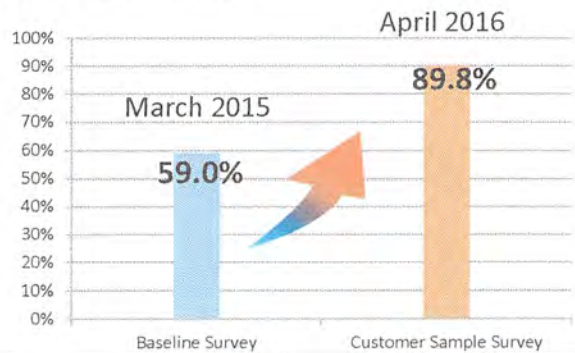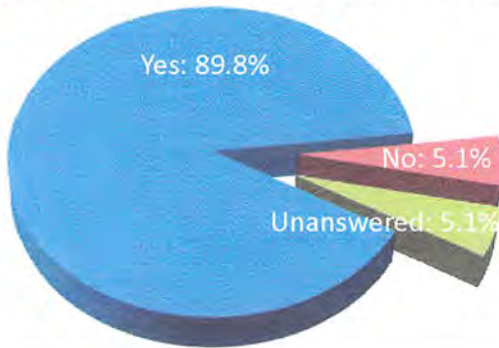

If you answer "Yes", how do you know about this?

TV	Radio	Newspaper	Others
60.0%	20.6%	8.8%	7.6% / 3.0%

Demonstration/Seminar

3. Status of Achievement for Project Purpose
(Result of the customer sample survey)

Have you ever heard of "Data Broadcasting"?

Will you use the Data Broadcasting Service when it has started?

3. Status of Achievement for Project Purpose
(Result of the customer sample survey)

Customers recognition rate: 8.1% (=14.2% × 56.8%)　　Target : 34%or more

　　　　　　　　customer sample survey's value　　households who own working television

However....

✓ There is "Important Assumption" in PDM
　　　-ISDB-T receivers are penetrated to households as planned.

└→ This assumption has not fulfilled yet and inhibited the rise of the figure. ISDB-T receivers' penetration is argent task for Botswana.

✓ More than 85% of people has already known the digital migration in Botswana.
✓ People who want to use Data Broadcasting increased by 30% from 2015.

└→ It's time to shift PR activities toward data broadcasting, ISDB-T receivers or other important issues.

DIMT

Technology and Licensing WG

Implementation of the Digital Migration Project in Republic of Botswana

4th JCC meeting
22nd April, 2016
JICA Technical Cooperation Project

DIMT

Content

1. To prepare ASO Plan

2. To review ISDB-T Standards of Botswana

3. To review specifications for receivers

4. To prepare terrestrial broadcasting station licensing criteria

1. To prepare ASO plan

- DBS has installed all 45 transmitting stations
- Digital switchover has been effected on 44/45, while 1/45 is awaiting installation of the digital antenna.
- Though the draft final ASO plan has been presented in Technology and Licensing WG, and the details agreed, but there is still a debate on ASO due to unavailability of STBs.
- The tentative target of ASO is June, 2016 which accords with the end of public education awareness activities by the tender project.

  Note

  The target of ASO has not been fixed mainly because of the following reasons.
  - There is no commercially available receivers in the market.
  - There is no firm policy decision(subsidy) on the provisions of STB.
  - The service coverage is not confirmed yet.

1-3 Transmitter Sites Map

All transmitters are available except Maope

1-4 ASO Criteria

It is necessary to prepare ASO criteria by which the judgments to conduct ASO is made.

The coverage area of digital transmitter network and the penetration of receiver will be our key indicators for ASO criteria.

1. Service Coverage : **80%** of analogue service area
2. Penetration of Receiver :65% of household

If each area covered by each transmitter satisfies this criteria, ASO can be realized.

2. To review ISDB-T Standards of Botswana

* The ISDB-T Standards document was submitted to BOCRA on 3rd Dec, 2014 and approved on the 10th March 2015.

* The document was then posted on the BOCRA website for easy access by manufactures.

* In order to improve the industries involvement on the supply of set top boxes, the specification has been posted on the local newspapers

* BOCRA has type approved some local companies for the supply of STBs

* With regard to EWBS, DiMT has worked with NDMO to develop the Area Code Table.

3. To review specifications for receivers

- The Specification for receiver involve three types of receivers such as STB, IRD and Portable/Mobile.

- Those specification documents will be mainly used for type approval.

- Technical specification for STB, IRD and Portable has been discussed in the WG and minimum STB specifications has since been published on the Botswana Daily News of 11th August 2015.

- Draft technical specifications for Portable/Mobile receivers that conforms to ISDB-T Standards of Botswana is being communicated with BOCRA and we expect to have final specifications by end of May 2016.

4. To prepare terrestrial broadcasting licensing criteria

- BOCRA issued consultation paper on licensing framework and collected comments by 23rd January 2015.

- Workshop on the consultation paper has been conducted on 3rd Feb, 2015.

- The licensing framework for the commercial broadcasting stations are currently under development.
- The DTT licensing will commence in October 2015

PR Working Group

Third Joint Coordinating Committee
April, 2016
JICA Technical Cooperation Project

Page 1

Content

1. Line up of activities

2. Achievement

3. Challenges

1. Line up of activities

1. Establishment of Public Relations WG

2. Development of Public Relations Plan

3. Press Conference: 1st April, 2015

4. Gaborone Seminar: 16th April, 2015

5. Francistown Seminar: 7th May, 2015

6. World Telecommunications Day: 16th May, 2015

7. Francistown BOCCIM Fair: 27th – 31st May, 2015

8. Public Service Day: 9th July, 2015

9. Gaborone Consumer Fair: 17th 23rd August, 2015

10. Maun Seminar: 11th September, 2015

11. Create to Public Relations Plan: 30th March, 2016

12. Call Centre Establishment (Preparation for Manual)

2. Achievements

- Press Conference: 57 participants

- DTTB Seminar in Gaborone: 131 participants

- DTTB Seminar in Francistown: 110 participants

- DTTB Seminar in Maun: 109 participants

- DTTB Seminar in Serowe: 40 participants

- Demonstration at Airport junction (13-14 March2015)

- Demonstration at Main Mall (20-21 March 2015)

- Demonstration at World Telecommunications Day (16 May 2015)

- Demonstration at Gaborone Consumer Fair (17-23 Aug. 2015)

3. Challenges

- Pilot Project carried out in Gaborone.

- Some Ministries and Private Sector organizations received TV Monitors and STBs to test reception of digital signals. (No formal feedback received)

- Need for the pilot project to be extended to other parts of the country. Call Center Establishment: Was to be manned by consultancies. (**JICA currently working on the Operation manual**)

- Questions about STBs and future plans for content development and more channels .

Thank you for your attention!

Programing WG
Implementation of the Digital Migration Project in
Republic of Botswana

4th Joint Coordinating Committee
22nd April, 2016
JICA Technical Cooperation Project

Page 1

1. Customer Sample Survey

Objective : To understand the current situation of TV environment in Botswana.

> Preference: popular program/genre, request for new program
>
> Watching habit: how often, what time, with whom
>
> Digital Migration: recognition
>
> Data Broadcasting: recognition, expectation   etc.

The result of this survey is also used for the evaluation of "Project Purpose".

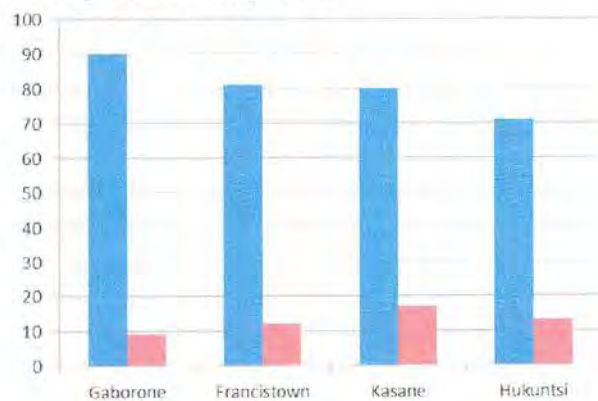| Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
Project Purpose			
Environment for the terrestrial digital broadcasting that takes advantage of the features of ISDB-T is ready.	1. **34% or more customers recognize the terrestrial data broadcasting of Botswana Television (BTV).** 2. Facilities and human resources planned as necessary for producing and broadcasting HD programs based on ISDB-T data broadcasting are developed.	1. Customer Sample Survey 2. Project Monthly Report	·Developments of DTTB network and related equipment are executed as planned. ·Developments of HD studio systems are executed as planned. ·ISDB-T receivers are penetrated to households as planned.

Excerpt from PDM

2. Outline of Customer Sample Survey

- Period: 1st April - 7th April 2016 (1 week)

- Area: 4 different area (Gaborone, Francistown, Kasane, Hukuntsi)

- Method: Random sampling with questionnaire

    - Questionnaire has 17 questions

    - There are 2 parts, General information and digitalization part

- Samples: totally 373 questionnaires ware collected.

	Gaborone	Francistown	Kasane	Hukuntsi
The number of Samples	99	93	97	84
Population(2011)	231,592	98,961	9,008	4,403

3. Result of the Survey - Digital Migration

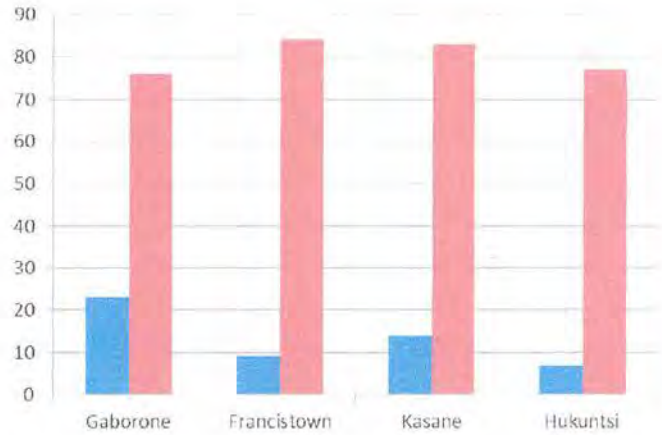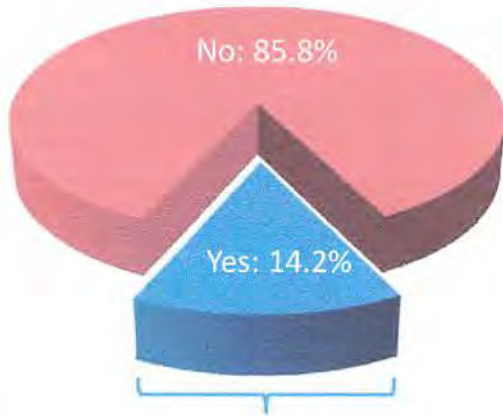Do you know about Botswana migrating from "Analog TV" to "Digital TV"?

No: 13.7%

Yes: 86.3%

If you answer "Yes", how do you know about this?

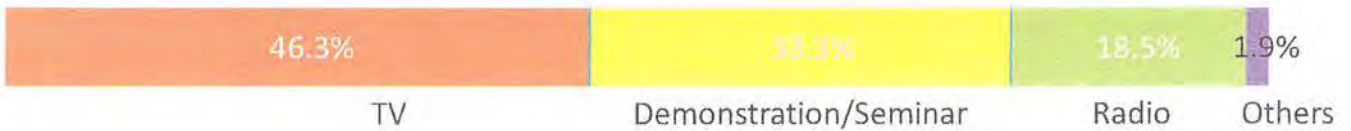| 60.0%	20.6%	8.8%	7.6%	3.0%
TV	Radio	Newspaper		Others
			Demonstration/Seminar	

4. Result of the Survey - Data Broadcasting

Have you ever heard of "Data Broadcasting"?

If you answer "Yes", how do you know about this?

46.3%	33.3%	18.5%	1.9%
TV	Demonstration/Seminar	Radio	Others

5. Result of the Survey - Data Broadcasting

Will you use the Data Broadcasting Service when it has started?
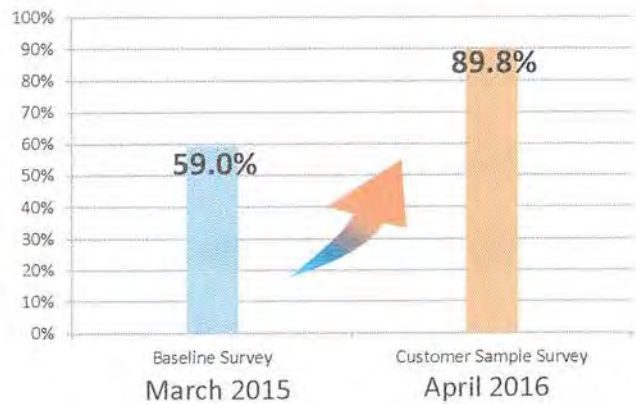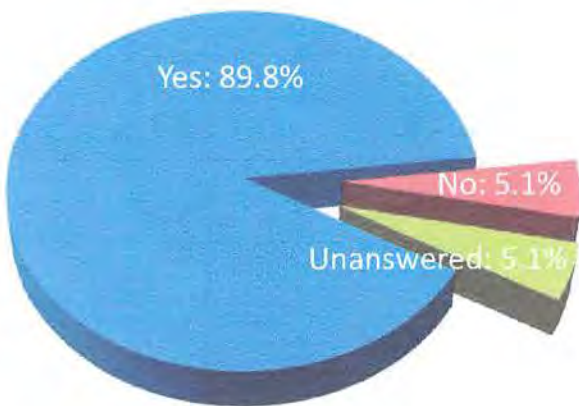
5. Customer Recognition Rate

Customers recognition rate: 8.1% (=14.2% × 56.8%)   Target : 34%or more

        customer sample survey's value   households who own working television

However….

✓ There is "Important Assumption" in PDM
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> ISDB-T receivers' penetration is argent task for Botswana.

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> It's time to shift PR activities toward data broadcasting, ISDB-T
> receivers or other important issues.

END

HD PROGRAM PRODUCTION WG

**Implementation of the Digital Migration Project
in
Republic of Botswana**

JCC meeting
22nd April, 2016, Gaborone
JICA Technical Cooperation Project

CONTENT OF PRESENTSTION

❏ Current Productions
❏ Production Manual

mk

INFORMATIONAL FEATURES

❏ The FIRST News Feature:

   ✓ The first news feature has been produced and broadcasted

   ✓ Content to be covered includes Updates on progress regarding Digital migration post the last feature

EDUTAINMENT PRODUCTIONS

❏ **Four programs on post production stage**
- Proposis management
- Sand dune rehabilitation
- Wildfire Management
- Sustainability of natural resources (basketry)

Two of the programs to be completed by the end of April while the rest will be ready during the first week of May. Airing expected during the second week of May.

❏ Educate public about the importance of preservation for natural resources.

PRODUCTION MANUAL

❏ Manual for HD programme production under development for BTV

❏ It is a seven chapter manual covering basic production process.

❏ Some items extracted from the manual already introduced to producers to assist in their production

Production manual will be printed and submitted to BTV.

BTV SHOOTING SCHEDULE (Example)

NAME OF THE PROGRAM	BTV Goes Digital: Digital Migration: Part 1
DATE of BROADCAST	1st week of April
PRODUCERS	Gail Kgomotso
REPORTER	
CAMERAMAN	Ontlametse Goaothuse

DATE of SHOOTING	13 March, 2015 (Friday)
OBJECT	Demonstration of Set Top Box by Data Broadcasting + PR WB Audience Survey by Programming WG

LOCATION	Airport Junction Mall
CONTACT/COORDINATOR	Orenelle Matsetse – JICA Administration/Publicity Officer Office: 365 3219 Mobile: 73 620 616

TIME	SCHEDULE	✔
11:00	Preparation @ BTV – Load equipment	
11:30	Crew call / Leave from Media Complex – Exact location?	
	(Gail, Ontlametse, Chiaki, Katsuya)	
12:00	Arrive @ Airport Junction Mall	
	Start shooting as soon as ready	
	Demonstration of Set Top Box by Data Broadcasting WG for Public Relations WG	
	• Demonstration	
	– Setting up the booth and equipment	
	(W, M, CU of hands, faces, etc., various shots)	
	– Demonstration by PR WG	
	(W, M, CU, P, various shots)	
	– Public watching demonstration and asking some questions	
	(Various shots from different angles)	
	– Interaction between WG and public (Various shots)	
	• Interviews	
	– BTV Data Broadcasting WG staff (HS)	
	– Public (HS)	

Datacasting WG

Implementation of the Digital Migration Project
in
Republic of Botswana

4rd JCC meeting
22th April, 2016
JICA Technical Cooperation Project

TABLE OF CONTENTS

mla B

WHAT IS DATA BROADCASTING?

It is an interactive service which broadcast data content (still pictures, images and text to supplement the video stream. Value added services carried here include electronic program guides, weather, traffic, promotional material (adverts), stock market and any other information which may or may not be related to the programs showing on the screen).

Data Broadcasting WG Members

Ms. Salome Senome was appointed as the leader of the WG.

No	Name	Position
1	Salome Senome	Executive producer
2	Gaone Karele	Graphic Designer
3	Gosaitse Koobonye	Marketing
4	Kefilwe Leero	Programme Producer
5	Gaotsenwe Ngwako	Sports Sports
6	Kedirileng Makgasa	Engineer
7	Itumeleng Siviya	News and Current affairs
8	Tabona Luza	Engineer
9	Torotea Mmopi	Program Producer
10	Beauty Sendi-Mpho	Editor
11	Bame Mogomotsi	Acquisition
12	Kaone Mosenti	Director
13	Maipelo Montwedi	Programing

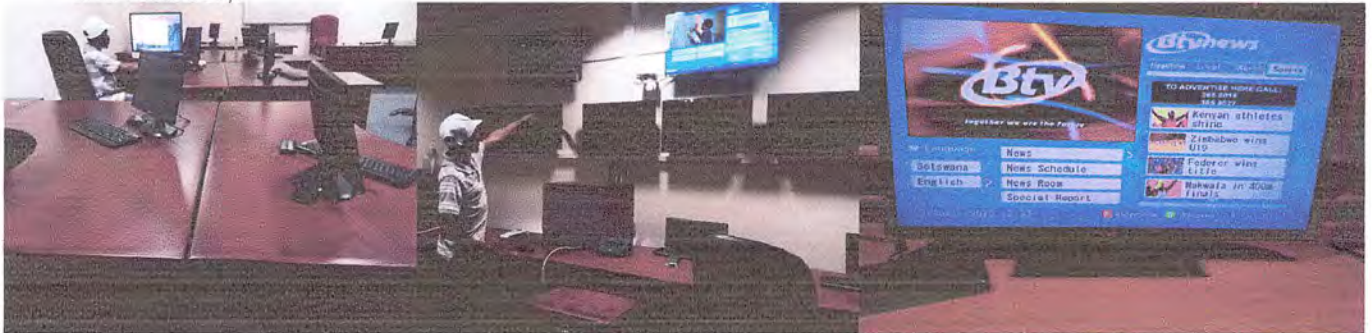# Data broadcasting officers

Nine (9) Core members operation experience
- ◆Salome : Head of Datacasting
- ◆Malebogo : Technical Supervisor (CMS)
- ◆Ngwako : Production Supervisor
- ◆Gaamangwe : Data Contents Manager
- ◆Karele : Graphic Designer Manager
- ◆Madabe : System Engineer Manager
- ◆Stella : Data Operator Manager
- ◆Olele : Data Operator
- ◆Bontlha : Data Producer

DATA BROADCASTING STUDIO

Data broadcasting studio is completed. The studio is currently operational with nine (9) officers, focusing on the following ; weather, sports log, bulletin clips and special events data content. On the 15th -19th February 2016, in house training was conducted to ensure that every producer can collect and update information on templates. This training was done with the assistance of the Japanese expert, for the implementation of four (4) in house programs as follows;(Silent Shout, Molemo wa Kgang, Flava Dome and Talkback).

IMPLEMENTATION OF DATA BROADCASTING PHASE 2 (to run for three years, starting 2016)

On the 6th - 12th March 2016, three 3 DBS senior officers went to Japan for planning Botswana e-government public information service on television.

The project is at tendering stage (ITT is submitted for vetting)
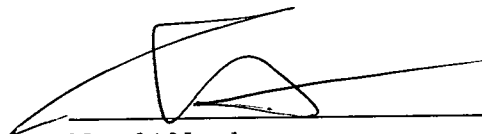
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Memorandum of the 5th JCC meeting

Memorandum

of

the Fifth Joint Coordinating Committee Meeting

for

the Implementation of the Digital Migration Project

in

the Republic of Botswana

(July 29, 2016)

_____
Mogomotsi Kaboeamodimo
Deputy Permanent Secretary
Ministry of State President
Government of Botswana

_____
Naoaki Nambu
Team Leader
Implementation of the Digital Migration
Project in the Republic of Botswana
(DiMT Project)

Memorandum of the 5th Joint Coordinating Committee (JCC) Meeting of the Project for Implementation of the Digital Migration Project in the Republic of Botswana (DiMT Project)

1. Date: 29th July, 2016
2. Time: 08:30- 10:30
3. Venue: Room216, Department of Broadcasting Service
4. Participants:
   <Botswana side>
   - Department of Broadcasting Services (DBS)
     - ✧ Mr. Lesole Obonye, Director, Ministry of State President
     - ✧ Ms. Bontle Mogotlhwane, General Manager-BTV
     - ✧ Ms. Keitirele Mathapi, General Manager – Radio
     - ✧ Mr. Kabo Dikolobe, General Manager - Engineering
     - ✧ Mr. Calvin Goiletswe, Chief Broadcast Engineer, Deputy Project Manager, Leader of Technology and Licensing WG
     - ✧ Mr. Solly Nageng, Head of Programmer, leader of HD program production WG
     - ✧ Ms. Lorato Ntuara, Copy Right Administrator, leader of Public relations WG
     - ✧ Ms. Salome Senome, Executive Producer, leader of Data broadcasting WG
     - ✧ Mr. Joel Thuto, Head Channel Controller, leader of Programing WG
     - ✧ Mr. Zibani Makali, CBE Engineering

   - Botswana Communication Regulatory Authority (BOCRA)
     - ✧ Mr. Bathopi Luke, Director - Compliance

   <Japanese side>
   - Embassy of Japan
     - ✧ Mr. Akio Yamamoto, Second Secretary

   - JICA Botswana Office
     - ✧ Mr. Yasuaki Aihara, Assistant Representative
     - ✧ Mr. Mothusi Tiyedze, Program Officer

   - JICA Expert Team (JET)
     - ✧ Mr. Naoaki Nambu, Team Leader/Broadcast Policy & Strategy
     - ✧ Mr. Katsuya Terabayashi, Deputy Team Leader/Institution/Training Plan 1
     - ✧ Ms. Keiko Uchiumi, Public Relations Plan/Training Plan2/Coordinator
     - ✧ Ms. Oreneile M. Matsetse, Public Relations/Facilitator
     - ✧ Ms. Condy Uapingen, Program Production
     - ✧ Mr. Kabelo Nkwane, Transmitter Engineer

5. Agenda

Time	Items			Presenter
08:30-08:35	Opening Remarks			Mr. Lesole Obonye
08:30-08:45	Final Report from each WG / Subject	Public Relations WG		Ms. Lorato Ntuara
08:45-09:20		Technology and Licensing WG		Mr. Calvin Goiletswe
				Mr. Luke Bathopi
09:20-09:30		HD Program Production WG		Mr. Solly Nageng
09:30-09:40		Programing WG		Mr. Joel Thuto
09:40-09:50		Data Broadcasting WG		Ms. Salome Senome
09:50-10:10	Result of the final review and after completion			Mr. Katsuya Terabayashi
10:10-10:20	AOB			
10:20-10:25	Closing Remarks			Mr. Naoaki Nambu
10:25-10:30				Mr. Akio Yamamoto
10:30-10:35				Mr. Yasuaki Aihara
10:35-10:40				Mr. Luke Bathopi

I. Discussion Note in the Fifth JCC Meeting

1. **Opening Remarks – MR OBONYE LESOLE**

   Mr. Lesole welcomed all to the meeting and apologized on behalf of Mr. Kaboemodimo who is still in a meeting at the parliament but will join us later.

2. **Working group summaries and comments**

   - **Technology and Licensing WG, Mr. Calvin Goiletswe**

     As far as installation of transmitter DBS has successfully installed all the 45 stations across the country, and 44 stations are currently on air except for the one in Maope which is awaiting installation of the digital antenna because the strength of the tower is not enough. The receiver's penetration remains a problem as all the transmitters are on air but there is no equipment for the viewers to watch digital television.

     ASO date has not been fixed because there is no receivers available in market, no firm policy on provision of the receiver and also because the service coverage is not yet confirmed. ISDB-T Standards of Botswana and also the receivers' specification have all been approved by BOCRA. All this documents are published on BOCRA's website.

   Technology and Licensing WG, Mr. Bathopi Luke

   Technical specifications of all the digital broadcasting receivers have been successfully published. Companies are not showing interest in the manufacturing and supply of set top boxes to the Botswana market. Two companies have already done type approval, one company from Taiwan has completed its prototype and also another company from South Africa is completing its prototype. One Challenge BOCRA has is some manufactures require guarantee. As for the Test Centre, BOCRA is grateful to have received the Test Center equipment from JICA. The Test Center has been successfully installed and its operation manual has also been prepared. BOCRA will publish a notification to the manufactures to inform about the test center by the end of August, 2016.

   The licensing of digital terrestrial television is going to be done competitively: it's going to be done through a tender. The tender documents have been drafted and not yet approved. The proposal is to have to kinds of licenses; Content Service Provider and Network Facilities Provider. Assessment of both licenses will be on the basis of technical proposals, economic proposals and citizen empowerment. BOCRA is currently waiting for final approval on these licensing criteria. Finally with regard to Analogue frequencies, we all aware that the analogue frequencies are no longer protected by existing agreements. Botswana has been on the negotiations with South Africa on a memorandum for coordination on use of analogue frequencies. Final draft prepared by Botswana side has been sent to South Africa already.

   It was asked whether it is possible that the commercial broadcasting station that has a license of content service provider broadcasts its programs by multiplexed into the BTV's

channel. BOCRA answered that there is no act or regulation to judge whether it is possible or not. It needs to be elaborated in the future. DBS commented that it is engaging with interested private broadcasters to use their infrastructure will then inform the government to make the decision.

- **Public Relations – Ms. Lorato Ntuara**
  The function of the Public Relations Working Group (PR WG) was to educate the public about Digital Migration Broadcasting through a number of awareness activities. DBS through the assistance by Japanese Expert Team (JET) of the DiMT project achieved all their activities with the last one being the Call Centre which is currently being established. However, the PR WG experienced some challenges. The main being is the unavailability of set top boxes on the market which caused a lot of confusion during the awareness activities. In addition to that, the PR WG did not receive feedback regarding the pilot project that was done on the set top boxes received by the Ministry of Internal Affairs and Communications in Japan. All in all the, the leader of the PR WG informed that they have learnt a lot from their working relations with the Japanese team. At the end of the presentation, it was asked that DBS prepares a plan of how to manage the receiver's penetration upon their arrival.

- **HD Program Production - Mr. Solly Nageng**
  The HD Program Production Working Group (HD WG) started with a news feature that was responsible for sensitizing the public about the digital migration project. It has also done three (3) Edutainment programs in collaboration with the Department of Forestry that have aired on Botswana Television, being the Prosopis plant management, the sand dune stabilization and the fire drilling program. Another program on basketry is expected to air on the first week of August 2016. The HD WG has also done the training for the live sports program planning even though HD OB van was not available. However the training still took place. This training was to teach the members how to operate and produce program in HD format. The HD Program Production Manual has been completed and distributed to the members.

- **Programming - Mr. Joel Thuto**
  The Programming Working Group (Programming WG) conducted a market survey of which the results there were presented at the Maun Seminar and approved by DBS. The JET conducted another survey to determine the knowledge, reaction and acceptance of the public regarding the digital migration project for project achievement evaluation and even though it was successful and the report was completed, the public could not offer too much information because they still do not have access to the set top boxes.

- **Data Broadcasting - Ms. Salome Senome**

  Data broadcasting services have been ongoing since the establishment of the Data Broadcasting unit, they have been producing related and non-related contents. Since the public do not have set top boxes and cannot receive the digital signal, the unit has been broadcasting only to less than 100 viewers who are in the government sector where the trial set top boxes were distributed for demonstration purpose. The user manual and the training manual have been completed and presented to the Data Broadcasting Unit.

- **Result of the final review and after completion –Mr. Katsuya Terabayashi**

  It was confirmed whether the Project achieved outputs and project purpose by checking the objectively verifiable indicators of each item. The progress was explained between the statuses of before the beginning of the Project and after the project.

  For output 1, various plans and systems necessary for migration to digital broadcasting are developed, 7 objectively verifiable indicators have been satisfied and 5 official deliverables have been produced. For output2, DBS's capacity of producing programs including High Definition and data broadcasting is improved, 5 objectively verifiable indicators have been satisfied and 5 official deliverables have been produced. It was agreed that both outputs are achieved.

  Project purpose is also achieving if digital receivers are available. The figure in the objectively verifiable indicator, the recognition rate of data broadcasting 34 %, was not satisfied due to the availability of digital receivers and HD program production is not possible due to the lack of HD studio systems. If the receivers are penetrated to the household and HD studio systems are procured according to the plan, the project purpose will be achieved. The overall goal was explained and recommendations were made how Botswana side can proceed in order to satisfy overall goal.

3. **AOB**

   - **About HTML5:**

     It was asked by Mr. Thuto whether we are likely to have our system modified in the future since we are using Broadcast Markup Language (BML) and most countries now using HTML 5. It was answered by Mr. Nambu that in Japan we are using both BML and HTML 5 (On trial purposes). BML is the initial language for Data Broadcasting and after sometime BTV can migrate to HTML 5. There is compatibility between two languages and if BTV has skills on BML, it is smooth to migrate to HTML5.

     It was asked by Mr. Luke if most people have moved to HTML, whether it is possible to have HTML 5 receivers that read BML. The world is moving to HTML 5.

     It was answered that the methods of how to shift HTML 5 and what measures are required at the receiver side will be confirmed and reported by 5th August in writing.

It was asked by Mr. Luke who has the responsibility to send updates to the receivers over air if it is possible to update software of data broadcasting browser and make HTML 5 available on BML browser. Ms. Mogotlhwane answered it should be approved first by the regulator to avoid problems whether it would be by the broadcasting stations or the regulator.

4. Remark

- ### Mr. Calvin Goiletswe

Mr. Goiletswe thanked the Working Groups for their presentations as well as JET for the recommendations that were done for the success of the Digital Television beyond the termination. He informed that, they have made another application to the Government of Japan through the blessing of the embassy for further technical assistance of an expert on Public Education and ASO and they are waiting response on the outcome. Lastly he expressed his gratitude towards the JET for their working relations in the two years of technical cooperation.

- ### Mr. Naoaki Nambu – Team Leader, JET of DiMT

Mr. Nambu officially submitted the Call Centre and the Test Centre Operation Manuals to Mr. Lesole Obonye and Mr. Bathopi Luke as today is the due date for their submission to JICA. He informed that two of the three deliverables have been confirmed and that one of the deliverables of the technical cooperation is the procurement of the HD studio systems which is still pending and form part of the overall success of the projects.

Mr. Nambu shared that he learnt a lot of behavioral differences during his time in Botswana which is completely different in Japan and generally encouraged the Botswana team to be more committed to timelines of projects for the smooth operation of the work output. He expressed his sincere gratitude for the two years that they worked in Botswana with the counterparts and said he looks forward to coming back again.

- ### Mr. Akio Yamamoto – Japanese embassy

Mr. Yamamoto informed that he received application forms from DBS regarding another digital migration expert and HD program production training in Japan and he forwarded it to the Ministry of Foreign Affairs who are currently deliberating on them. In early July, 2 officials from Botswana visited Japan and discussed a few things on digital broadcasting and Minister of Internal Affairs and Communications is considering digital data broadcasting phase two.

- ### Mr. Yasuaki Aihara – JICA/JOCV Botswana Office

Mr. Aihara acknowledged that it was quite remarkable to note most of the outputs and achievements which have been realized considering the project started from scratch. The project, he informed, we could converge here to conclude it, and so much has been achieved

through the training to the seminars held in different places in Botswana and in Japan. He said that JICA was in consideration of dispatching an expert but he stressed it does not mean the Botswana counterparts can just wait for the expert's arrival, rather they should continue their efforts. Even though problems have been experienced here and there, it was not unique to this project. In his conclusion, he wished to see STB in the market in the near future so that people can enjoy the Digital Television and urged DBS to endeavour for it.

5. **Closing remarks – Mr. Bathopi Luke**

In his closing remarks, Mr. Luke recognized that Japan and Botswana are different countries in terms of development, culture and technology. He alluded to the fact that during the inception of the project, they took into consideration the challenges that they may face in working together as a team due to the cultural differences and working principles of the two countries. However, he informed that as a team, they have learnt to work and understand each other's working ethics and culture hence all that they have achieved in this project. Mr. Luke expressed his gratitude towards the Japanese experts who have been in Botswana throughout the duration of the project, citing that they learnt a lot from them and would adopt some of their best practices to their work. I believe that you will be able to promote us to other countries and vice versa. We are very thankful to our governments for this collaboration and we sincerely hope that this will strengthen our relations even for future endeavors.

II. Discussion Note in after the Fifth JCC Meeting

1. **Submission of the list of equipment provided to DBS**

After the JCC meeting, the list of equipment procured by the Project and handed over to DBS was received by the director of DBS. He responded that we reply with the letter of receipt.

2. **Approval of procurement plan of HD studio systems**

After the JCC meeting, the procurement plan of HD studio systems was approved by Deputy Permanent Secretary and officially submitted to DBS.