

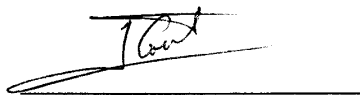
A2: Minute of Meeting

MINUTES OF MEETING
ON
THE INCEPTION REPORT
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA


AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
NOVEMBER 13, 1998



Mr. Issa Coulibaly
Directeur National de la Cartographie
et de la Topographie



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

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The Scope of Work for the National Topographic Mapping of the Republic of Mali in the Kita Area was agreed between Japan International Cooperation Agency (hereinafter referred to as JICA) and La Direction Nationale de la Cartographie et de la Topographie, Ministère de l'Urbanisme et de l'Habitat (hereinafter referred to as DNCT) on the 3rd day of February 1998. The JICA Study Team headed by Mr. Junichi Koseki visited Mali to discuss and confirm the Inception Report of the Study from 30 October to 13 November 1998.

The discussion presided by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the DNCT were held several times from 2 to 11, November 1998 in the conference room in the DNCT. The list of the attendants is attached hereto as Appendix.

After several discussion, the following matters were agreed and confirmed between the JICA Study Team and the DNCT:

- (1) The JICA Study Team submitted the Inception Report to the DNCT and explained the details of the contents. After several discussion between the JICA Study Team and the DNCT, the DNCT understood and both the parties basically agreed upon the contents of the Inception Report. However, slight corrections in the Inception Report are shown in (5).
- (2) The DNCT requested the JICA Study Team to receive as many Mali counterpart personnel as possible to participate the training courses in Japan. The JICA Study Team promised to convey the request to the JICA Headquarters.
- (3) The DNCT requested the JICA Study Team to provide four (4) sets of digital levels to modernize the survey methods and equipment in Mali. The JICA Study Team promised to convey the request to the JICA Headquarters.
- (4) The DNCT requested the JICA Study Team to prepare the technical documents such as the Survey Manual and documents for technology transfer operation in French. The JICA Study Team replied that the technical documents will be prepared in English except the Inception Report, Draft Final Report, Draft Final Report (Summary), Draft Survey Manual, Draft Improvement Plan and their Final Reports. Both the parties, however, agreed to cooperate to translate the technical documents into French.
- (5) The DNCT indicated the expression and words in the Inception Report to be corrected as follows:

Page 4, 6. Outline of the Study, 4. Aerial photography

Total area to be covered by the aerial photographs Approx. 10,600km²

- Area not covered by the existing aerial photos Approx. 5,500km²

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- Area covered by the existing aerial photos Max. 5,100km²
but the quality of the images is not sufficient
for the interpretation.

Page 7, 8. Contents of the first year's Study, 8.3. Reproduction of the existing aerial photos

- ① Contact prints : 1 set (583 photos)
- ② Two times enlarged aerial photos : 1set(583 photos)

- (6) The DNCT requested the JICA Study Team to provide not only the GPS base line analysis software (French version) but also the computer hardware. The JICA Study Team promised to convey the request to the JICA Headquarters.
- (7) The JICA Study Team and the DNCT agreed to adopt the Clarke 1880 as the reference ellipsoid. And also it is agreed by both the parties that the existing 12th Parallel Survey points will be as reference horizontal ground controls and the existing benchmarks as reference vertical ground controls.
- (8) The Minutes of Meeting were written in both English and French. In case, any contradiction arises, the English shall be the text.

The List of attendants in the meeting.

DNCT

- | | |
|-------------------------|---|
| 1. Mr.Issa COULIBALY | Directeur National de la Cartographie et de la Topographie. |
| 2. Mr.Diakalia OUATTARA | Directeur Ajoint |
| 3. Mr.Aliou COULIBALY | Chef Division Infrastructure de Base |
| 4. Mr.Silamakan TRAORE | Ingenieur Photogrammetre |
| 5. Mr.Chiaka FORE | Technicien des Constructions civiles |
| 6. Mr.Modibo CAMARA | Ingenieur Topographe |
| 7. Mr.Soboua TRAORE | Technicien des Constructions civiles |
| 8. Mr.Yala SIDIBE | Technicien des Constructions civiles |
| 9. Mr.Cheickna KOUMARE | Technicien des Constructions civiles |
| 10. Mr.Mamadou CARARA | Ingenieur Photogrammetre |
| 11. Mr.Alassane BA | Docteur Ingenieur Cartographe |

JICA Study Team

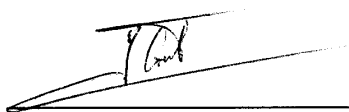
- | | |
|----------------------|----------------------------|
| 1. Mr.Junichi KOSEKI | Team Leader |
| 2. Mr.Mobuo SHIMIZU | Co-team Leader |
| 3. Mr.Hajime GOTO | Geoid Survey (1) |
| 4. Mr.Hitoshi KOAMI | Geoid Survey (2) |
| 5. Mr.Ichiro NONAKA | Administrative Support (1) |
| 6. Mr.Norio YOKOKAWA | Interpreter |

MINUTES OF MEETING
ON
THE PROGRESS OF THE WORK
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
JANUARY 8, 1999



Mr. Issa Coulibaly
Directeur National de la Cartographie
et de la Topographie



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

JK

Mr. Junichi Koseki, the leader of the JICA Study Team visited Mali to discuss the present and future schedules and work items and also reply the questions asked by the DNCT in the previous discussion of the Inception Report from 3 to 9 January 1999. The discussion presided by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the DNCT were held several times from 5 to 8, January 1999 in the conference room in the DNCT. The list of the attendants is attached hereto as Appendix.

After several discussion, the following matters were agreed and confirmed between the JICA Study Team and the DNCT:

1. Progress of the Work

(1) Leveling for the geoid survey

- Three (3) leveling routes, a total of 360km (north, southwest and south routes) were located after the field reconnaissance and thirty six (36) benchmarks were located and monumented along the three (3) routes.
- The field observation of the leveling along the southwest route (100km) and south route (60km) were completed as of the end of December 1998.

(2) Aerial photography

- Tendering for the aerial photography was carried out and MAPS Geosystems was decided as the Contractor out of the two candidates.
- The number of reproduction of the existing aerial photographs was confirmed, which will be carried out by MAPS Geosystems who keep the negatives.

2. Schedules for the next stage

(1) Leveling for the geoid survey

- Field observation of the north route approximately 200km will be carried out within thirty (30) days from the beginning of January 1999.
- Field confirmation of existing benchmarks and pricking of the new benchmarks will be carried out after the reproduction of the existing aerial photographs are printed.

(2) Aerial photography

- The aerial photography will be carried out by the Contractor, MAPS Geosystem from late of January 1999.

(3) Reproduction

- Contact prints and enlargements for the photo interpretation, control points

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pricking and field identification will be carried out by MAPS Geosystems.

3. The Work in the next year and the after

(1) Confirmation of items to be shown on the Topographic Maps

- Symbols and annotations to be used, and their applications to the Topographic Maps were discussed. It is decided that symbols and annotations shown on the existing 1:50,000 National Topographic Map titled Kossanto will be basically used for the Topographic Maps.

(2) Confirmation of instruments to be used for the Work

- The DNCT requested the GPS survey instruments to be used for the ground control survey, to be compatible with their own instruments. The software of the instruments are also requested by the DNCT to be French version.
- Instruments to be used for the digital mapping and compilation were discussed and the DNCT requested the instruments to be compatible with the instruments to be introduced by the IGN France for the 1:200,000 map data processing. The JICA Study Team replied that it is expected the instruments based on the Intergraph digital mapping systems. Three (3) sets of the instruments are expected to be used for the Study.

4. Replies to questions asked by the DNCT in discussion on the Inception Report

- Training in Japan will be conducted for one (1) person for two months during one (1) fiscal year. However, two (2) persons for one month basis can be arranged.
- Instruments for the digital leveling will not be introduced into the Study for the second year and the after.
- Instruments for the GPS survey will be four (4) units of GPS receivers and controllers including the personal computer and base line analysis softwares.

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Appendix

List of Attendants in the Meeting

DNCT

- | | |
|--------------------------|--|
| 1. Mr. Issa COULIBALY | Directeur National de la Cartographie et de la Topographie |
| 2. Mr. Aliou COULIALY | Chef Division Infrastructure de Base |
| 3. Mr. Silamakan TORAORE | Ingenieur Photogrammetre |
| 4. Mr. Modibo CAMARA | Ingenieur Topographie |
| 5. Mr. Mamadou CAMARA | Ingenieur Photogrammetre |
| 6. Mr. Alassane BA | Docteur Ingenieur Cartographe |
| 7. Mr. Yala SIDIBE | Technician des Constructions Civiles |

JICA Study Team

- | | |
|------------------------|------------------|
| 1. Mr. Junichi KOSEKI | Team Leader |
| 2. Mr. Nobuo SIMIZU | Co-Team Leader |
| 3. Mr. Hajime GOTO | Geoid Survey (1) |
| 4. Mr. Hitoshi KOAMI | Geoid Survey (2) |
| 5. Mr. Norio YOKOKAWA | Interpreter |
| 6. Mr. Mamadou MACALOU | Interpreter |

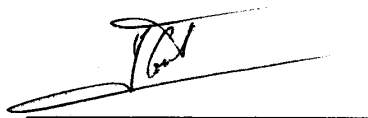
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MINUTES OF MEETING
ON
THE PLAN OF OPERATIONS OF THE SECOND YEAR WORK
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAHO
JULY 23, 1999



Mr. Issa Coulibaly
Directeur National de la Cartographie
et de la Topographie



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

JK

Mr. Junichi Koseki, the leader of the JICA Study Team visited Mali to discuss the schedule and work items of the second year work.

The discussions presided over by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the DNCT, were held several times from July 19 – 22, 1999, in the conference room of the DNCT. The list of the attendants is attached hereto as an Appendix.

After several discussions, the following matters were agreed and confirmed between the JICA Study Team and the DNCT:

- (1) The JICA Study Team submitted the Progress Report 1 to the DNCT. The DNCT suggested to substitute Point 58 for Adindan as the geodetic reference. The JICA Study Team agreed it and corrected it.
- (2) Field Sampling was scheduled from July 16 - 18, 1999 for the preparation of the list of keys for photo interpretation. The JICA Study Team requested the DNCT to jointly carry out Field Sampling in the Kita area, and as a result, this work was carried out successfully.
- (3) The JICA Study Team submitted the Plan of Operations of the second year work and explained the details of its contents. The DNCT understood the explanation and both parties agreed upon the contents of the Plan of Operations.
- (4) The JICA Study Team submitted the Survey Manual on Photo Interpretation and the related Technology Transfer Program and explained the details of its contents. The DNCT understood them. It was agreed that the Survey Manuals on the GPS Survey and Field Identification, and the related Technology Transfer Programs would be submitted in October, 1999.
- (5) The Study Team requested the DNCT to assign four more counterparts for Field Identification and GPS Survey which will be carried out from December, 1999. The DNCT agreed upon it.
- (6) The JICA Study Team prepared a draft of the design of marginal information. The JICA Study Team requested the DNCT to examine the details of the contents, and it was agreed that both parties would discuss them at next year's meeting.

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(7) The DNCT prepared and explained a draft of the Legend of Map Symbols and Annotation System to compile topographic map features. The Study Team agreed the contents of the Legend of Map Symbols and Annotation System. The both parties will examine further the details.

LISTE DES PARTICIPANTS A LA REUNION DU 19JUILLET 1999.

1. Issa	COULIBALY	Directeur N. C.T.
2. Diakalia	OUATTARA	Directeur N. Adjoint C.T.
3. Aliou	COULIBALY	Chef du Projet
4. Mamadou	CAMARA	Homologue Ingénieur photogrammètre
5. Alassane	BA	Dr. Ingénieur Cartographe
6. Modibo	CAMARA	Ingénieur Topographe
7. Cheickna	KOUMARE	Technicien
8. Yala	SIDIBE	Technicien
9. Soboua	TRAORE	Technicien
10. Bakari	DIARRA	Technicien

JICA Study TEAM

1. Junichi	KOSEKI	Team Leader
2. Hiromi	OGAWA	Photogrammetric Ingeneer
3. Henji	NAMIKI	"-
4. Ichiro	NONAKA	Administrative
5. Norio	YOKOKAWA	Interprète Administrative

JICA Tokyo

1. Takahiro	KASAI
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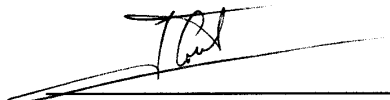
1. Seiichi	TANIOKA	Team Leader of evaluation
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MINUTES OF MEETING
ON
THE PLAN OF OPERATION OF THE GPS SURVEY
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

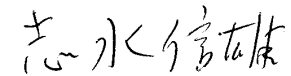
AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
OCTOBER 20, 1999



Mr. Issa COULIBALY
Directeur National de la Cartographie
et de la Topographie



Mr. Nobuo SHIMIZU
Co-Leader, Study Team
Japan International
Cooperation Agency

Prior to the field operations of the GPS Survey in the second year, a technical meeting on the GPS Survey was held between the JICA Study Team and DNCT Technical Officials on 20 October 1999 in the meeting room of DNCT Bamako Office. A list of the members attended the meeting were attached hereto as Appendix.

After clarification and discussion, the following matters were agreed and confirmed between the JICA Study Team and the DNCT:

1. Introduction of new members of DNCT engineers and technicians

Due to the increase of field operations, several DNCT counterpart personnel were newly assigned and introduced to the JICA Study Team. Those were:

Mr. Bakary COULIBALY, Ingenieur Topographe,

Mr. Modibo DIAKITE, Technicien Geometre,

Mr. Amadou DIALLO, Technicien Sup. Photogrammetre and

Mr. Bourama KONTA, Technicien Sup. Photogrammetre.

2. Schedule of the field operations in the second year

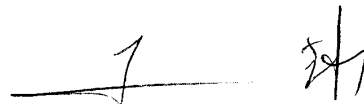
Overall schedule of the field operations in the second year was explained by the JICA Study Team and agreed by the DNCT Officials as follows:

- 1) The GPS Survey including the technology transfer would be conducted and carried out from the middle of October 1999 through the end of February 2000.
- 2) The Field Identification including the technology transfer would be conducted and carried out from the beginning of December 1999 through the end of February 2000.
- 3) Mr. SHIMIZU, Co-Team Leader, who arrived in Mali on 18 October 1999, would leave for Japan on 12 December 1999.
- 4) Mr. KOSEKI, Team Leader would arrive in Mali on 19 February and stay until 6 March 2000.

3. Details of the GPS Survey field operations

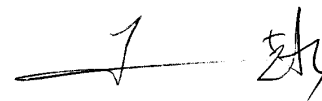
- 1) Drafts of "The Survey Manual on the GPS Survey for the National Topographic Mapping in Kita Area in the Republic of Mali" (English and French editions) and "Technology Transfer Program on the GPS Survey" (English edition), which were previously prepared by the JICA Study Team were submitted.
- 2) The details of three categories of the GPS Survey, namely the GPS Survey for Geoid Survey, GPS Survey for ground controls of spatial triangulation and GPS Survey for supplementary points were explained and clarified by the JICA Study Team.

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- 3) Details of planning of the necessary technical and assistant personnel and equipment for the GPS survey were explained and clarified by the JICA Study Team.
- 4) Time schedule of the GPS Survey was described and clarified by the JICA Study Team.

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Appendix

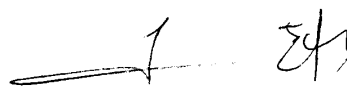
List of Attendants in the Meeting

DNCT

1. Mr. Diakalio OUATTARA	Directeur National Adjoint de la Cartographie et de la Topographie
2. Mr. Aliou COULIBALY	Chef Division Infrastructure de Base
3. Mr. Alassane BA	Docteur Ingenieur Cartographe
4. Mr. Modibo CAMARA	Ingenieur Topographie
5. Mr. Mamadou CAMARA	Ingenieur Photogrammetre
6. Mr. Bakary COULIBALY	Ingenieur Topographe
7. Mr. Yala SIDIBE	Technician des Constructions Civiles
8. Mr. Modibo DIYAKITE	Technician Geometre
9. Mr. Chickna COUMARE	Technician Geometre
10. Mr. Soboua TRAORE	Technician Geometre
11. Mr. Amadou DIALLO	Technician Sup. Photogrammetre
12. Mr. Bakari DIARRA	Technician Sup. Photogrammetre
13. Mr. Chiaka FORE	Technician Geometre
14. Mr. Bourama KONTA	Technician Sup. Photogrammetre

JICA Study Team

1. Mr. Nobuo SIMIZU	Co-Team Leader
2. Mr. Hajime GOTO	Geoid Survey (1)
3. Mr. Hitoshi KOAMI	Geoid Survey (2)
4. Mr. Norio YOKOKAWA	Interpreter
5. Mr. Mamadou MACALOU	Interpreter

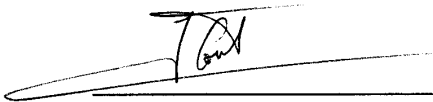


MINUTES OF MEETING
ON
THE PLAN OF OPERATION OF THE FIELD IDENTIFICATION
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

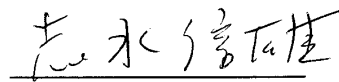
AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
DECEMBER 10, 1999



Mr. Issa COULIBALY
Directeur National de la Cartographie
et de la Topographie



Mr. Nobuo SHIMIZU
Co-Leader, Study Team
Japan International
Cooperation Agency

Prior to the field operations of the Field Identification in the second year, a technical meeting on the Field Identification was held between the JICA Study Team and DNCT Technical Officials on 6 December 1999 in the meeting room of DNCT Bamako Office. A list of the members attended the meeting were attached hereto as Appendix 1.

After clarification and discussion, the following matters were agreed and confirmed between the JICA Study Team and the DNCT:

1. Introduction of new members of DNCT engineers and technicians

Due to the increase of field operations, DNCT counterpart personnel and Japanese counterpart were newly assigned and introduced each other. Those were:

Mr. Bourama KONTA, Technicien Sup. Photogrammetre.

Mr. Kenji Suzuki, Japanese engineer

2. Schedule of the field operations in the second year

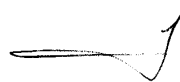
Overall schedule of the field operations in the second year was explained by the JICA Study Team and agreed by the DNCT Officials as follows:

- 1) The Field Identification including the technology transfer would be conducted and carried out from the beginning of December 1999 through the end of February 2000.

3. Details of the Field Identification

- 1) Drafts of "The Survey Manual on the Field Identification for the National Topographic Mapping in Kita Area in the Republic of Mali" (English and French editions) and "Technology Transfer Program on the Field Identification" (English and French editions), which were previously prepared by the JICA Study Team were submitted.
- 2) The details of three categories of the Field identification, namely the Collection of information, Confirmation on site, Arrangement of information and confirmed items were explained and clarified by the JICA Study Team.
- 3) Details of planning of the necessary technical and assistant personnel and equipment for the Field Identification were explained and clarified by the JICA Study Team.
- 4) Time schedule and organization of the party of the Field Identification was described and clarified by the JICA Study Team.
- 5) Prior to the commencement of field identification, the preparation work such as numbering of villages on the two times enlarged photographs was explained and clarified by the JICA Study Team.

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4. Draft of Map Symbol and their application rule and Marginal Information

Draft of Map Symbol and their application rule and Marginal Information were prepared and submitted by the JICA Study Team.

Those documents were finalized by the representatives of both parties through technical discussion.

Detailed meorandum are attached to as Appendix 2.

Representatives of DNCT

Mr. Alassane Ba

Docteur Inginieur Cartographe

Mr. Modibo CAMARA

Inginieur Topographie

Representatives of JICA Study Team

Mr. Hiromi OGAWA

Field identification 1

Mr. Nobuo SHIMIZU

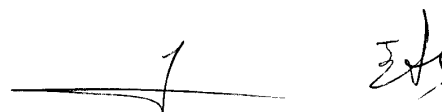
Co-Team Leader

Mr. Norio YOKOKAWA

Interpreter

Mr. Brahim OULOGUEM

Interpreter and Secretary

Handwritten signature and initials. The signature is a horizontal line with a vertical stroke at the end. The initials are 'EHS'.

Appendix 1

List of Attendants in the Meeting

DNCT

- | | |
|-------------------------|--------------------------------------|
| 1. Mr. Aliou COULIBALY | Chef Division Infrastructure de Base |
| 2. Mr. Alassane BA | Docteur Ingenieur Cartographe |
| 3. Mr. Modibo CAMARA | Ingenieur Topographie |
| 4. Mr. Bakary COULIBALY | Ingenieur Topographe |
| 5. Mr. Amadou DIALLO | Technician Sup. Photogrammetre |
| 6. Mr. Bakari DIARRA | Technician Sup. Photogrammetre |
| 7. Mr. Bourama KONTA | Technician Sup. Photogrammetre |

JICA Study Team

- | | |
|--------------------------|----------------------------------|
| 1. Mr. Nobuo SIMIZU | Co-Team Leader |
| 2. Mr. Hiromi OGAWA | Field identification (1) |
| 3. Mr. Kenji NAMIKI | Field identification (2) |
| 4. Mr. Kenji SUZUKI | Field identification(3) |
| 5. Mr. Norio YOKOKAWA | Interpreter |
| 6. Mr. Brahima OUOLOGUEM | Interpreter and Secretary |
| 7. Mr. Gasussou OUATTARA | Interpreter and Second Secretary |

JICA

- | | |
|--------------------|-----------------|
| 1.Mr. Hisashi MORI | JICA Supervisor |
|--------------------|-----------------|

Handwritten signature and initials, possibly 'J' and 'E/B', on a horizontal line.

MINUTES OF MEETING
ON
THE PROGRESS IN THE SECOND YEAR
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

AGREED UPON BETWEEN

LA DIRECTION NATIONALE DE LA CARTOGRAPHIE
ET DE LA TOPOGRAPHIE,
MINISTERE DE L'URBANISME ET DE L'HABITAT
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
FEBRUARY 25, 2000



Mr. Diakalia OUATTARA
Directeur National P.I
de la Topographie



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

DJ

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The meeting was held on 23 February 2000 in a meeting room of DNCT Bamako, between the JICA Study Team and the DNCT counter parts, and agreed upon items as follows:

1. Both parties confirmed the completion of field survey in the second year as follows:
 - (1) Photo interpretation
The photo interpretation was carried out based on a rules and methods of map symbols and annotations, which was agreed and confirmed by both the parties.
 - (2) Field identification
Items that could not be identified by the photo interpretation and/or items impossible to be photo interpreted were identified in the fields.
 - (3) GPS survey for the geoid survey
The GPS survey was carried out on the existing and new benchmarks to determine the geoid undulation in the areas. With the results, the geoid undulation map was prepared.
 - (4) GPS survey for the ground controls of the spatial triangulation
Twenty four (24) ground controls were established for the spatial triangulation. The coordinates data were transformed into the Mali local coordinates system.
 - (5) GPS survey for the supplementary points
To strengthen the accuracy of the 1:50,000 national topographic maps, the spot heights were established all over the mapping areas.

2. Technology transfer

Both the parties confirmed and agreed that the technology transfer on the survey items mentioned above was successfully carried out during the field operations.

3. Field operations in the third year

The JICA Study Team confirmed that the field operations in the third year will be carried out from August 2000 as scheduled.

4. Equipment and vehicles provided by the JICA Study Team

The JICA Study Team asked for the DNCT that those equipment and vehicles should be well maintained by the DNCT after the Study Team left for Japan and the DNCT promised it.

PARTICIPATORS IN MEETING ON 23 FEBRUARY 2000

D.N.C.T.

	NAME	
1. Aliou	COULIBALY	Project chief
2. Mamadou	CAMARA	Engineer
3. Modibo	CAMARA	Engineer
4. Bakary	COULIBALY	Engineer
5. Alassane	BA	Dr. Engineer
6. Chaka	FORE	Technician
7. Modibo	DIAKITE	Technician
8. Cheickna	KOUMARE	Technician
9. Bourama	KONTA	Technician
10. Yala	SIDIBE	Technician
11. Bakari	DIARRA	Technician
12. Brahim	OUOLOGUEM	Interpreter
13. Mamadou	MACALOU	Interpreter

JICA Team

1. Junichi	KOSEKI	Team Leader
2. Nobuo	SHIMIZU	Co-Team Leader
3. Hiromi	OGAWA	Chief Engineer
4. Kenji	NAMIKI	Engineer
5. Kenji	SUZUKI	Engineer
6. Hajime	GOTO	Chief Engineer
7. Hitoshi	KOAMI	Engineer
8. Toshiyuki	FUJIOKA	Engineer
9. Ichiro	NONAKA	Administrator
10. Norio	YOKOKAWA	Interpreter

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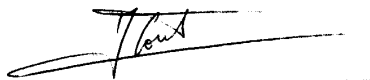
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MINUTES OF MEETING
ON
THE PLAN OF OPERATIONS OF THE THIRD YEAR WORK
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

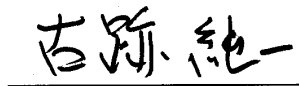
AGREED UPON BETWEEN

L'INSTITUT GEOGRAPHIQUE DU MALI
MINISTERE DE L'EQUIPMENT, DE L'AMENAGEMENT DU
TERRITOIRE, DE L'ENVIRONNEMENT ET DE L'URBANISME
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
October 6, 2000



Mr. Issa Coulibaly
Directeur Generale
Institut Geographique du Mali



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

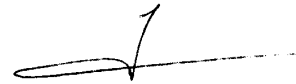
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Mr. Junichi Koseki, the leader of the JICA Study Team visited Mali to discuss the schedule and work items of the third year work.

The discussions presided over by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the IGM, were held on September 26, 2000, in the conference room of the IGM. The list of the attendants is attached hereto as an appendix.

After several discussions, the following matters were agreed and confirmed between the JICA Study Team and the IGM:

- (1) The JICA Study Team submitted 20 copies of the Progress Report 2 to the IGM. The IGM accepted it.
- (2) The JICA Study Team submitted the Plan of Operations of the third year work and explained the details of its contents. The IGM understood the explanation and both parties agreed upon the contents of the Plan of Operations.
- (3) The JICA Study Team submitted the Survey Manual on Digital plotting and the related Technology Transfer Program and explained its contents. The IGM understood them. The Survey Manuals on Digital Compilation, Field completion, structured compilation, and the related Technology Transfer Programs will be submitted in November, 2000.
- (4) Two sheets of map to be prepared in Mali were selected to ND-29-III-4d and ND-29-III-3c in the sheet of 1:200,000 topographic map named Shirakoro.
- (5) The Digital Mapping System will be provided by the JICA Study Team. The JICA Study Team confirmed that the IGM had equipped the room to install the Digital Mapping System.



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Appendix

List of Attendants in the Meeting

IGM

1. Mr. Issa COULIBALY	Directeur Generale De l'IGM
2. Mr. Aliou COULIALY	Chef Division Infrastructure de Base
3. Mr. Silamakan TORAORE	Ingenieur Photogrammetre
4. Mr. Mamadou CAMARA	Ingenieur Photogrammetre
5. Mr. Modibo CAMARA	Ingenieur Topographe
6. Mr. Bakary COULIBALY	Ingenieur Topographe
7. Mr. Alassane BA	Docteur Ingenieur Cartographe
8. Mr. Yalla SIDIBE	Technicien des Constructions Civiles
9. Mr. Cheickna KOUMARE	Technicien des Constructions Civiles
10. Mr. Soboua TRAORE	Technicien des Constructions Civiles
11. Mr. Modibo DIAKITE	Technicien des Constructions Civiles
12. Mr. Bakary DIARRA	Technicien des Constructions Civiles
13. Mr. Amadou DIALLO	Technicien des Constructions Civiles
14. Mr. Bourama KONTA	Technicien des Constructions Civiles

JICA Study Team

1. Mr. Junichi KOSEKI	Team Leader
2. Mr. Tsuneo TERADA	Digital Mapping
3. Mr. Chugo ODAKA	Digital Mapping
4. Mr. Ichiro NONAKA	Administrative Support
5. Mr. Norio YOKOKAWA	Interpreter

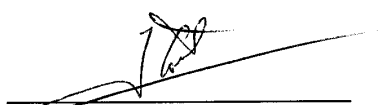
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MINUTES OF MEETING
ON
THE PROGRESS REPORT
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA

AGREED UPON BETWEEN

L'INSTITUT GEOGRAPHIQUE DU MALI
MINISTERE DE L'EQUIPMENT, DE L'AMENAGEMENT DU
TERRITOIRE, DE L'ENVIRONNEMENT ET DE L'URBANISME
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMAKO
March 13, 2001



Mr. Issa Coulibaly
Directeur General de l'IGM



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

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Mr. Junichi Koseki, the leader of the JICA Study Team visited Mali to discuss the present and future schedules and work items from 18 February to 14 March, 2001. Discussion was presided by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the IGM. The discussion was held at the conference room in the IGM on 9 March 2001. The list of attendants is attached hereto as an Appendix 1.

The following matters were discussed and agreed between the JICA Study Team and the IGM:

1. Progress of the third stage

(1) Digital data acquisition

- The geographic features of two sheets were acquired from orthophoto images as digital data in Mali. The rest 46 sheets were carried out in Japan.
- In digital data acquisition work, two sets of the digital mapping system, which were prepared by the Study Team temporarily, were used.

(2) Field completion

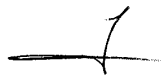
- Every geographic feature which was difficult to acquire during digital mapping, was examined and confirmed in the field.

(3) Digital data compilation

- The acquired geographic features were digitally edited using computer graphic software and converted to digital mapping data.
- Two sheets were carried out in Mali.

(4) Structurization

- To prepare plotting data for topographic maps, digital mapping data were structurized.
- Two sheets were carried out in Mali.



2. Schedules for the next stage

(1) Preparation of printing film

- Forty eight (48) printing films will be prepared in Japan.

(2) Print topographic maps

- Five hundred (500) copies of each topographic map will be printed in Japan.

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(3) Preparation of digital mapping data file

- The digital mapping data on CD-ROM will be prepared in Japan.

(4) Preparation of the final report

- The draft final report will be prepared. The study team will call on Bamako to discuss the details of the draft final report in August 2001. The final report will be prepared based on discussion.

3. Technology transfer

- The mapping technology necessary for the preparation of the 1:50,000 scale topographic maps have been transferred successfully by the Study Team to the IGM engineers and technicians except the portion which could not be able to execute due to the reason of delay of arrival of the digital mapping systems.

(1) Digital mapping system

- The digital mapping systems to acquire and compile the digital data were set up on 8 March 2001.
- However, the Study Team had not enough time unfortunately, to teach the operations of these mapping systems and peripheral devices such as printer, digitizers, plotter and scanner sent by the JICA.

(2) Request for technology transfer of digital mapping

- Due to the delay of arrival of digital mapping system, the IGM expressed the worry about the operations of the system sent by the JICA only by the counterparts of the IGM.
- Therefore, the IGM requested to send engineers well qualified to transfer the additional technology using these digital mapping systems and peripheral devices sent by the JICA.
- The JICA Study Team promised to convey the request of the IGM to the JICA Headquarters.

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4. Administration to be lent by JICA

- The IGM promised to administrate cars and the GPS Survey Set, the digital mapping system which are used in next stage.

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Appendix 1

The list of attendants in the meeting

IGM

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|--------------------------|--------------------------------------|
| 1. Mr. Issa COULIBALY | Directeur de l'IGM |
| 2. Mr. Diakalia OUATTARA | Dircteur ajoint de l'IGM |
| 3. Mr. Aliou COULIBALY | Chef Division Infrastructure de Base |
| 4. Mr. Silamakan TRAORE | Ingenieur Photogrammetre |
| 5. Mr. Modibo CAMARA | Ingenieur Topographie |
| 6. Mr. Mamadou CAMARA | Ingenieur Photogrammetre |
| 7. Mr. Alassane BA | Docteur Ingenieur Cartographe |
| 8. Mr. Amadou DIALLO | Technician des Constructions Civiles |
| 9. Mr. Bakary DIARRA | Technician des Constructions Civiles |
| 10. Mr. Bourama KONTA | Technician des Constructions Civiles |
| 11. Mr. Yala SIDIBE | Technician des Constructions Civiles |
| 12. Mr. Cheikna KOUMARE | Geometric engineer |
| 13. Mr. Modibo DIAKITE | Geometric engineer |

JICA Study Team

- | | |
|----------------------------|---|
| 1. Mr. Junichi KOSEKI | Team Leader |
| 2. Mr. Nobuo SIMIZU | Co-Team Leader |
| 3. Mr. Toru WATANABE | Digital compilation and Structurization |
| 4. Mr. Yoshiteru MATSUSITA | Digital compilation and Structurization |
| 5. Mr. Norio YOKOKAWA | Interpreter |

JICA Supervisor

- | | |
|---------------------|--------------------|
| 1. Mr. Hisashi MORI | Sepervisor of JICA |
|---------------------|--------------------|

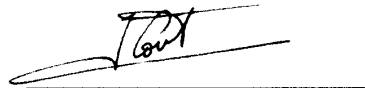
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MINUTES OF MEETING
ON
THE DRAFT FINAL REPORT
FOR
THE NATIONAL TOPOGRAPHIC MAPPING
OF
THE REPUBLIC OF MALI
IN
THE KITA AREA


AGREED UPON BETWEEN

L'INSTITUT GEOGRAPHIQUE DU MALI
MINISTERE DE L'EQUIPMENT, DE L'AMENAGEMENT DU
TERRITOIRE, DE L'ENVIRONNEMENT ET DE L'URBANISME
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

BAMA KO
August 24, 2001



Mr. Issa Coulibaly
Directeur General de l'IGM



Mr. Junichi Koseki
Leader, Study Team
Japan International
Cooperation Agency

Mr. Junichi Koseki, the leader of the JICA Study Team visited Mali to discuss the draft final report from 13 to 28 August 2001.

Discussion was presided by Mr. Junichi Koseki and Mr. Issa Coulibaly, the director of the IGM. The discussion was held at the conference room in the IGM on the 16 August 2001. The list of attendants is attached hereto as an Appendix 1.

The following matters were discussed and agreed between the JICA Study Team and the IGM:

- (1) The JICA Study Team submitted 20 copies of the draft final reports and explained the details. The draft final reports are composed of the following volumes.
 - Volume1: The draft final main report (English and French), 20 copies each.
 - Volume2: The draft final summary report (English and French) , 20 copies each.
 - Volume3: The draft of the survey manual (English and French) , 20 copies each.
- (2) Both the JICA Study Team and the IGM were confirmed to produce the final result such as the final reports, 50 sets of the topographic data on CD-ROM and 500 sets of the topographic maps.
- (3) The mapping technology necessary for the preparation of the 1:50,000 scale digital topographic maps has been transferred successfully by the JICA Study Team to the IGM engineers and technicians.
- (4) The IGM agreed that the final report and final results which were produced by the JICA Study Team will be opened to the public use.
- (5) The 4 vehicles, 4 sets of GPS, the digital compilation system and other equipments, which were used in the study will be donated to the IGM on the 23 August 2001.



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Appendix 1



The list of attendants in the meeting

IGM

- | | |
|--------------------------|--------------------------------------|
| 1. Mr. Issa COULIBALY | Directeur de l'IGM |
| 2. Mr. Diakalia OUATTARA | Dircteur adjoint de l'IGM |
| 3. Mr. Aliou COULIBALY | Chef Division Infrastructure de Base |
| 4. Mr. Silamakan TRAORE | Ingenieur Photogrammetre |
| 5. Mr. Modibo CAMARA | Ingenieur Topographie |
| 6. Mr. Mamadou CAMARA | Ingenieur Photogrammetre |
| 7. Mr. Alassane BA | Docteur Ingenieur Cartographe |
| 8. Mr. Amadou DIALLO | Technician des Constructions Civiles |
| 9. Mr. Bakary DIARRA | Technician des Constructions Civiles |
| 10. Mr. Bourama KONTA | Technician des Constructions Civiles |
| 11. Mr. Yala SIDIBE | Technician des Constructions Civiles |
| 12. Mr. Cheikna KOUMARE | Geometric engineer |
| 13. Mr. Modibo DIAKITE | Geometric engineer |

JICA Study Team

- | | |
|-----------------------|--|
| 1. Mr. Junichi KOSEKI | Team Leader |
| 2. Mr. Nobuo SIMIZU | Co-Team Leader |
| 3. Mr. Tsuneo TERADA | Digital data acquisition and compilation |
| 4. Mr. Toru WATANABE | Digital compilation and Structurization |
| 5. Mr. Norio YOKOKAWA | Interpreter |