

MEMORANDUM

Memorandum

8 - May - 2004

The following item is agreed upon between State Authority for Geodetic Works and JICA Study Team

1. The labeling on the negative film (the film annotation) is follows.

MAKEDONIJA C-15 DD/MM/YY 1:40,000 DZGR/JICA



Biserka JAKIMOVSKA

Director

State Authority for Geodetic Works

Saso Dimeski

Head of the Sector for Reference Nets
and Photogrammetry
Leader of the SAGW team

西村 明

AKIRA NISHIMURA

Leader

JICA Study Team

Memorandum

8 - May - 2004

The following item is agreed upon between State Authority for Geodetic Works and JICA Study Team

1. Target areas for On the Job Training (digital plotting and completion etc) of technology transfer are indicated in the attached Figure.



[Signature]
Biserka JAKIMOVSKA

Director

State Authority for Geodetic Works

[Signature]

Saso Dimeski

Head of the Sector for Reference Nets
and Photogrammetry

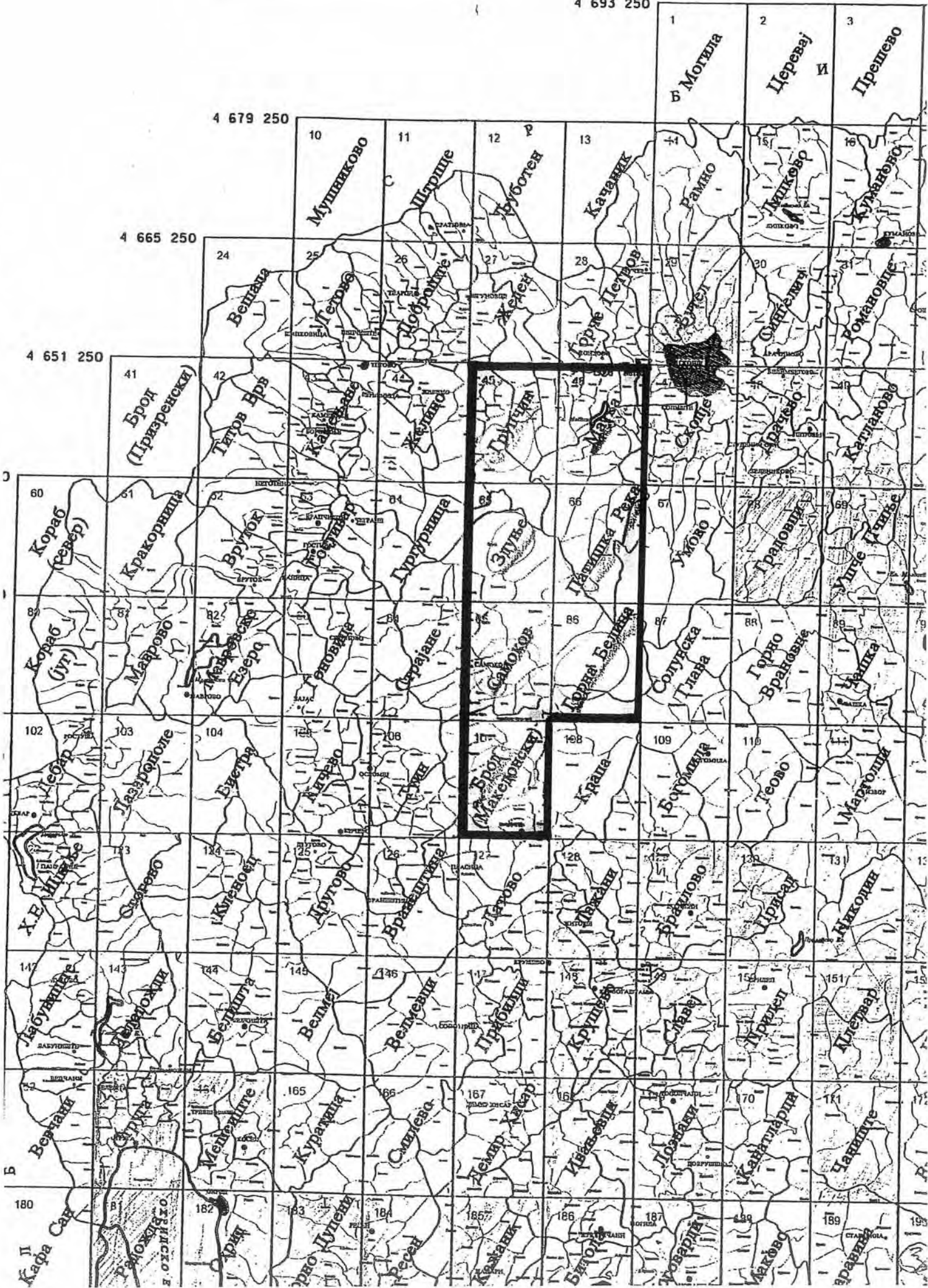
Leader of the SAGW team

[Signature]

AKIRA NISHIMURA

Leader

JICA Study Team



Бр. 01-1899/22
09-07 2004 год.
СКОПЈЕ

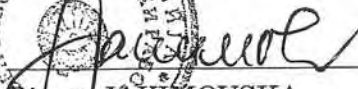
MEMORANDUM

July 9th, 2004

The following item is agreed upon between State Authority for Geodetic Works and JICA Study Team for Establishment of State Base maps for GIS in The Republic Macedonia:

1. The specification of topographic data is attached one.

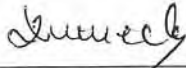



Bisera JAKIMOVSKA
Director

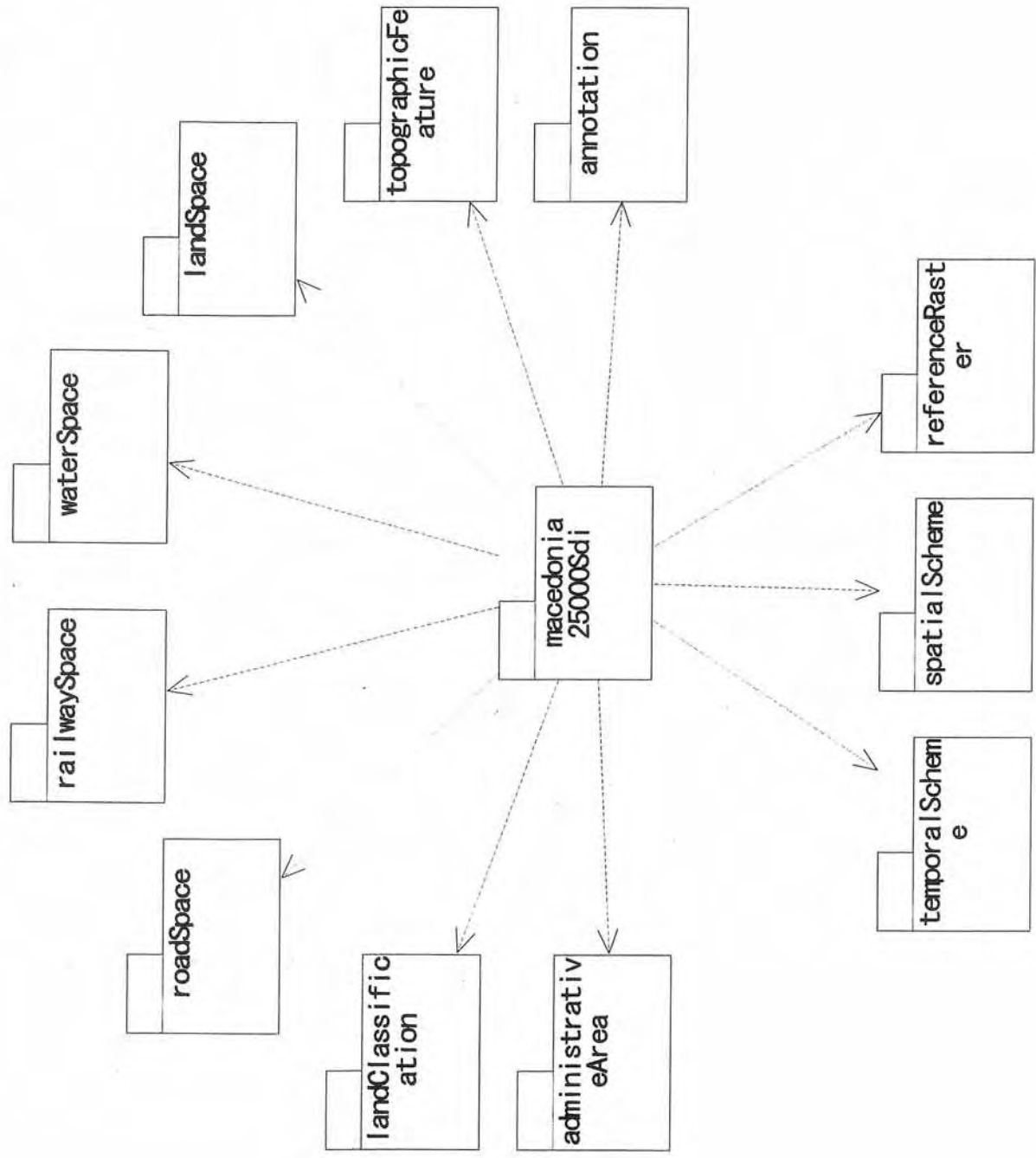
State Authority for Geodetic Works

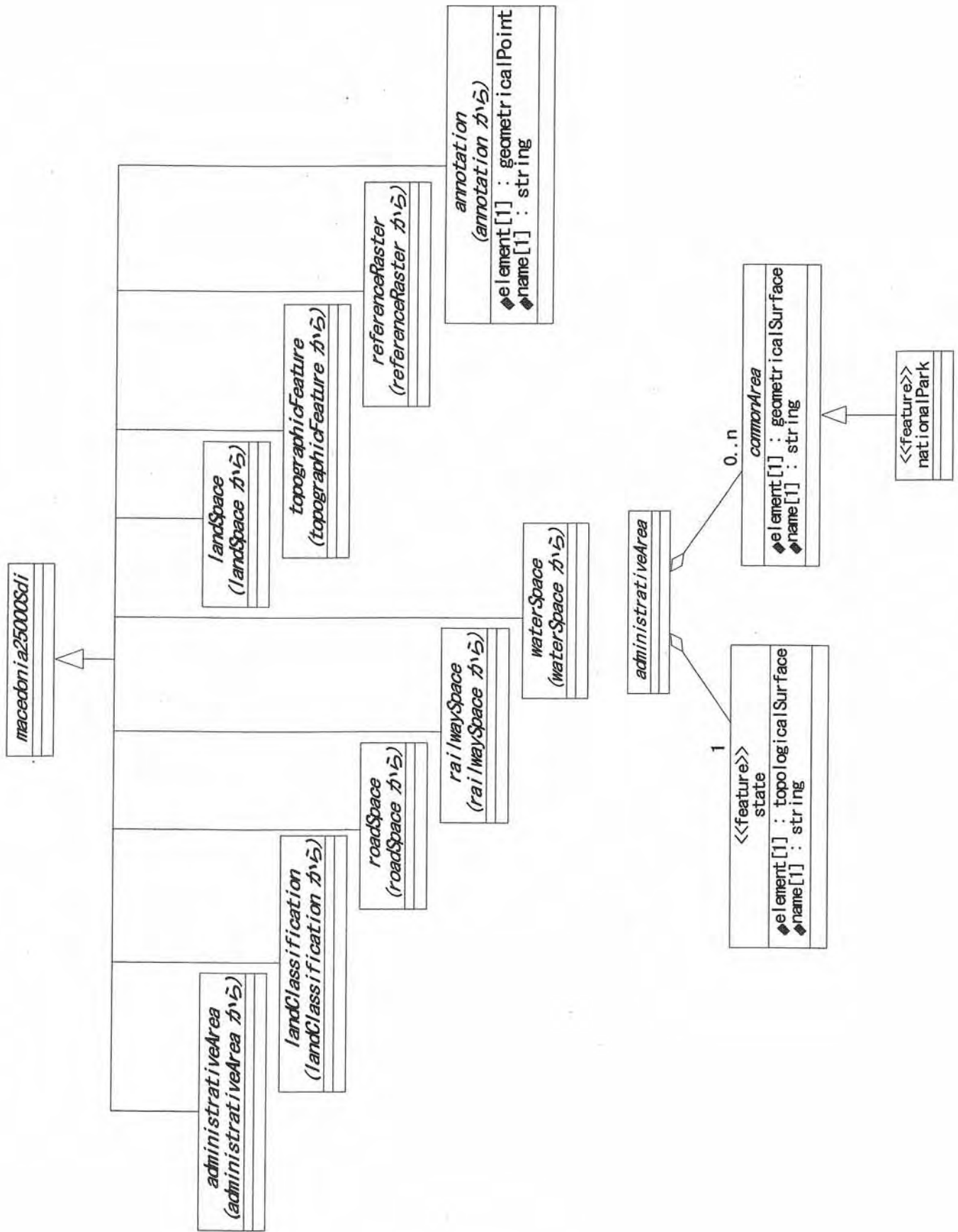


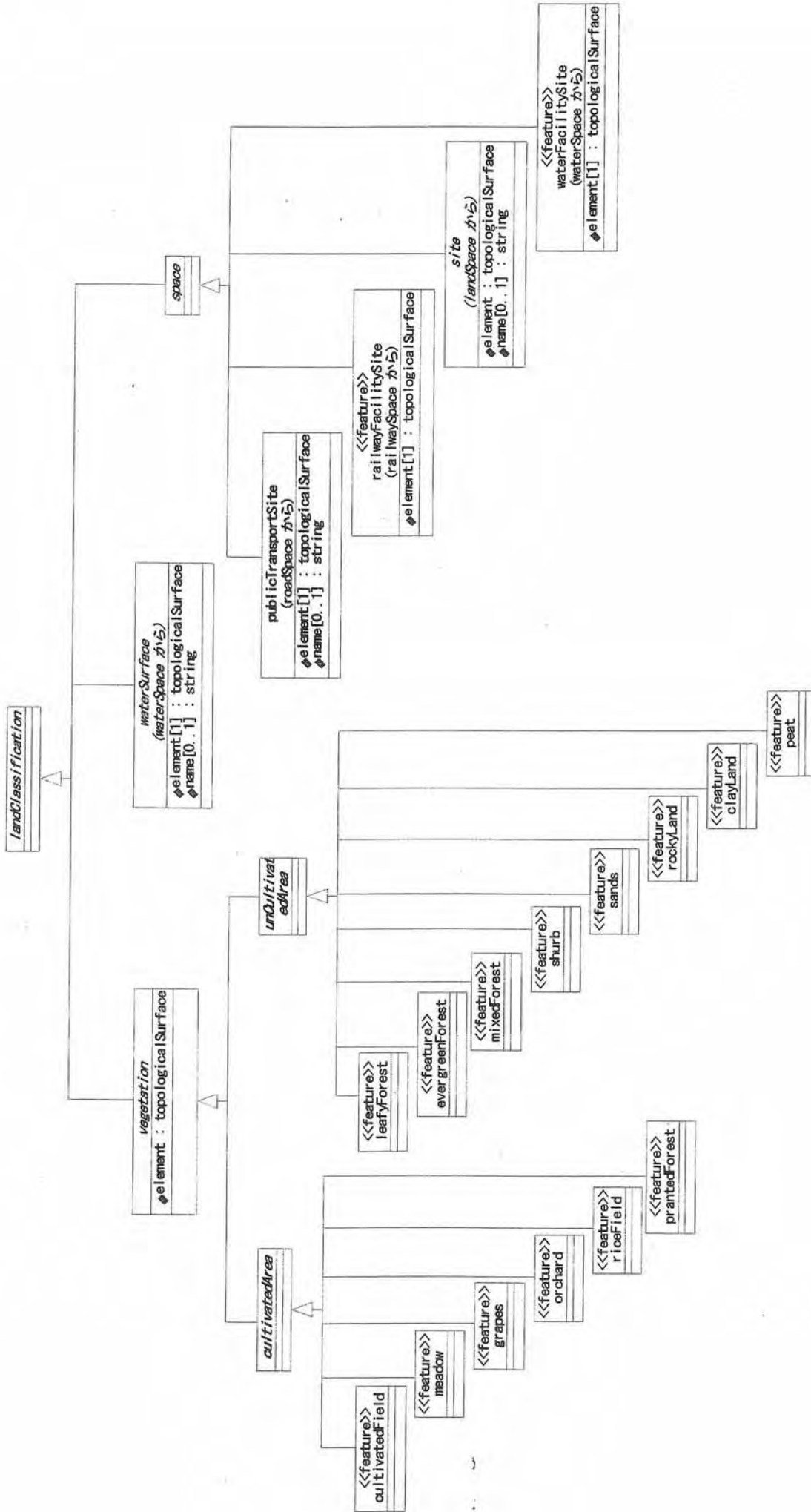
Satoru NISHIO
JICA Study Team

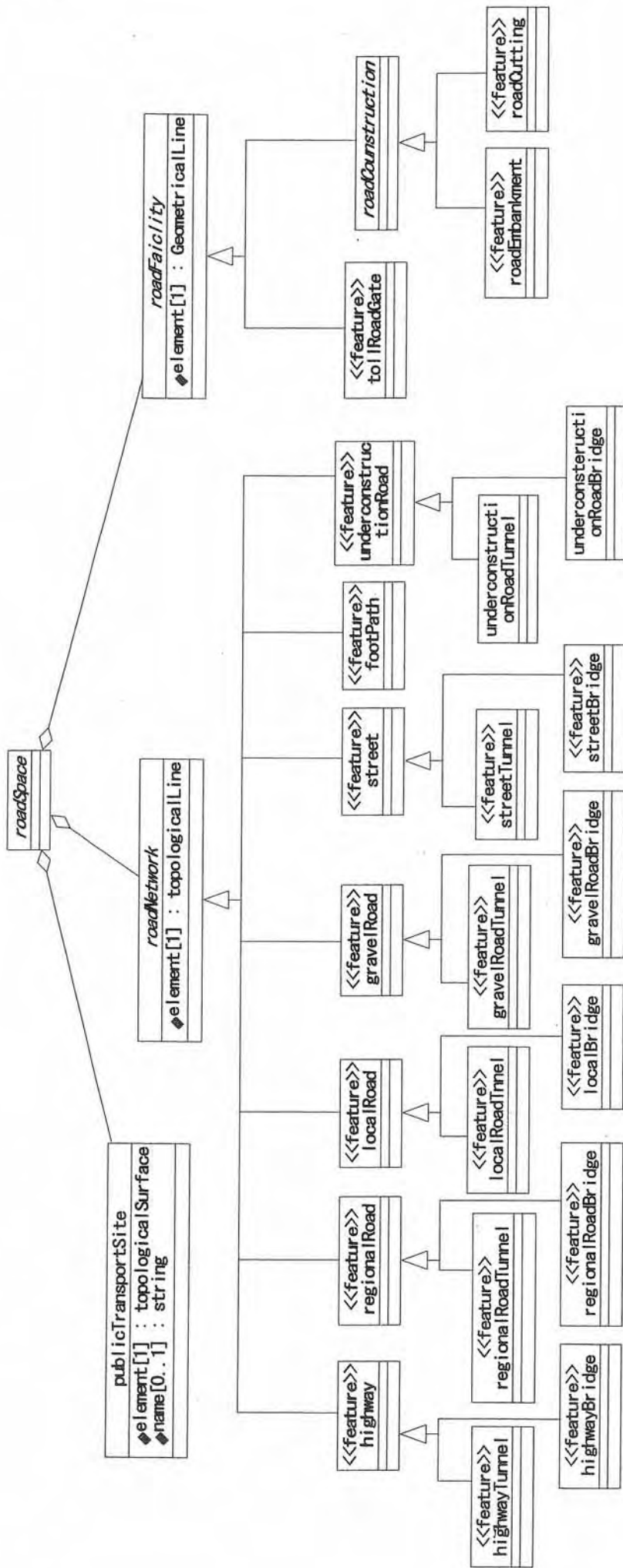


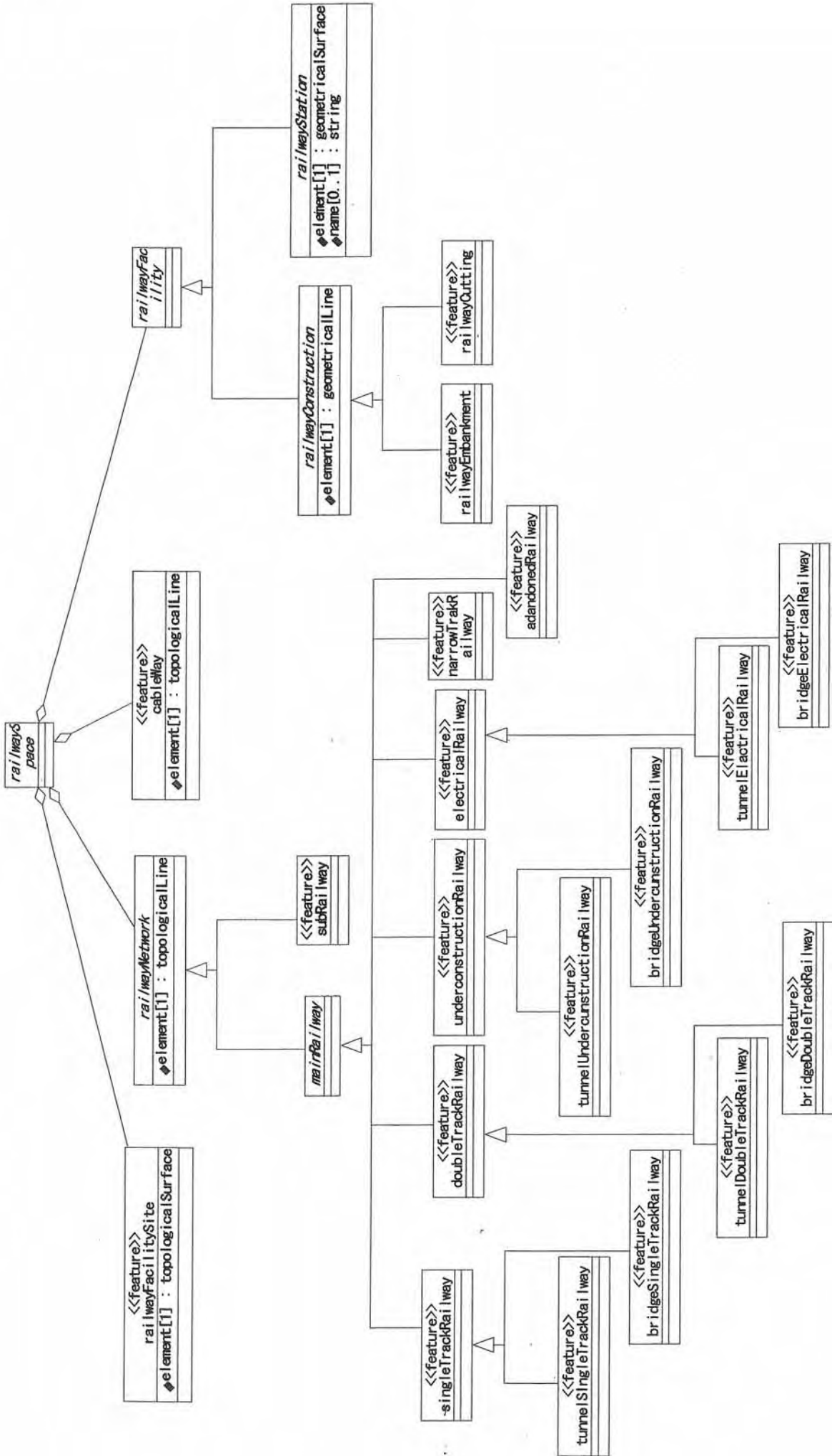
Sašo DIMESKI
Head of the Sector for Reference Nets
and Photogrammetry
Leader of the SAGW team

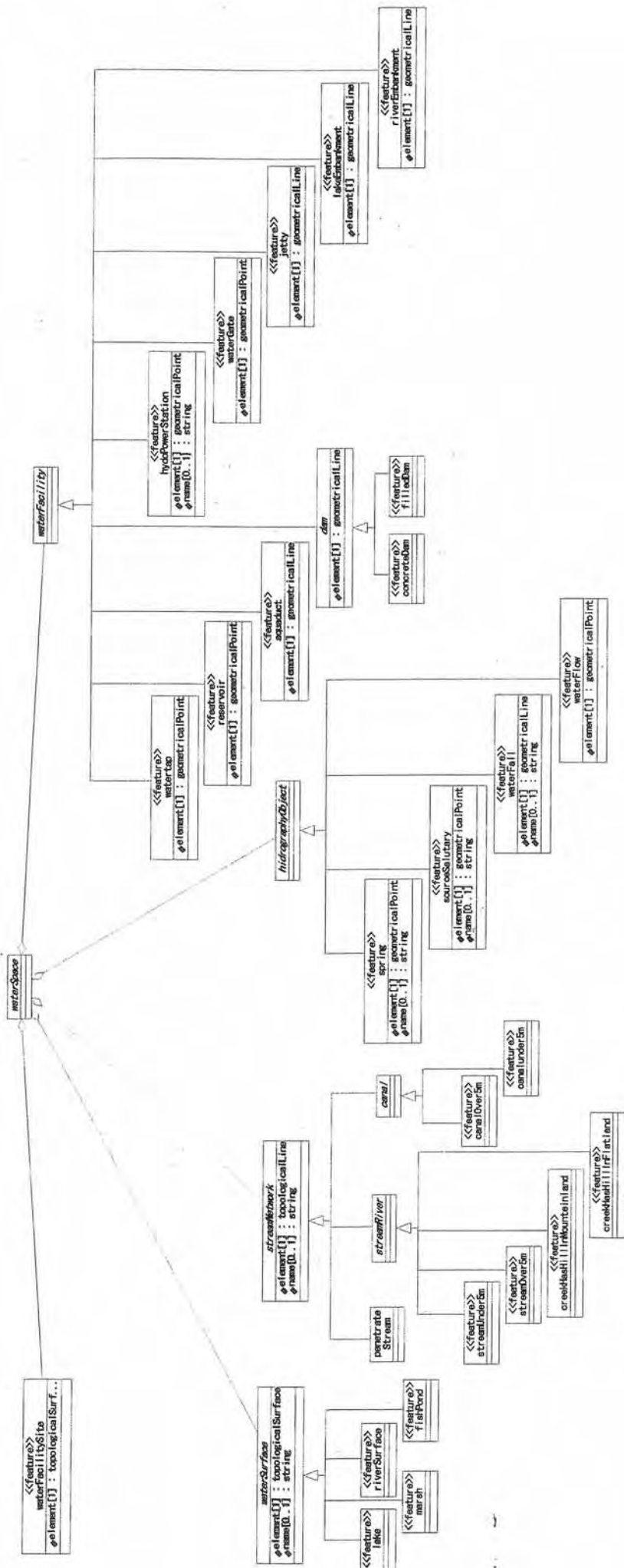


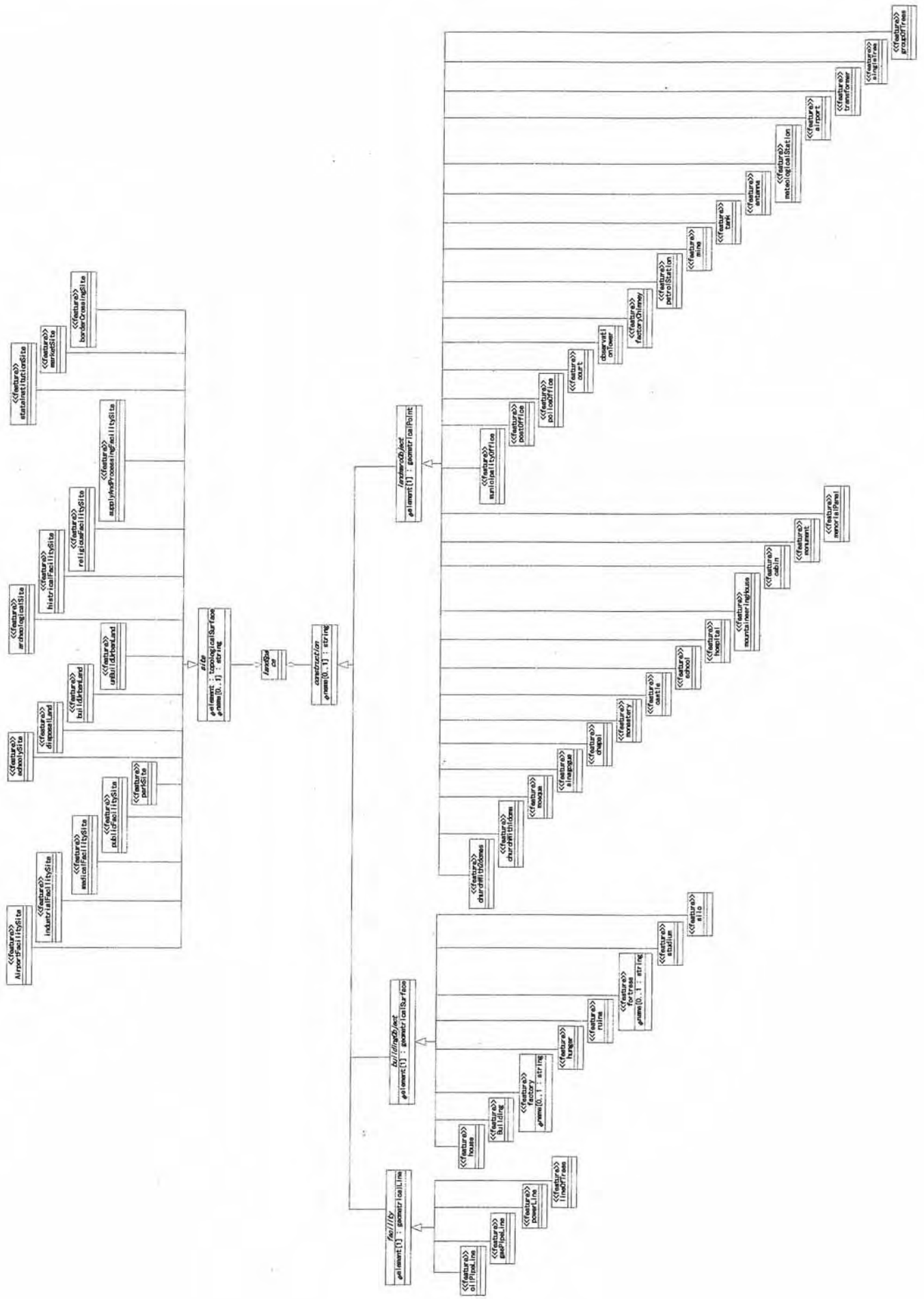


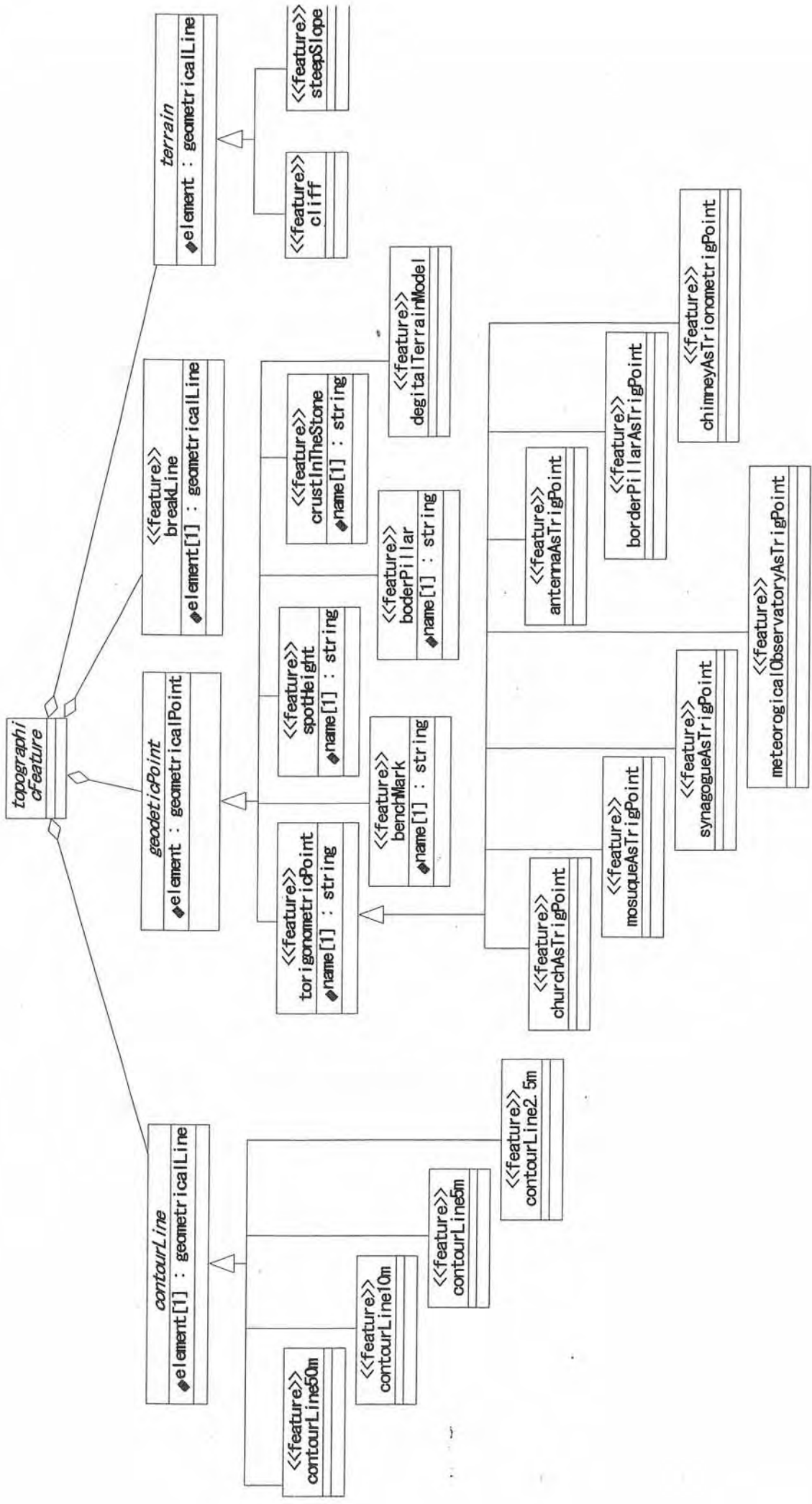


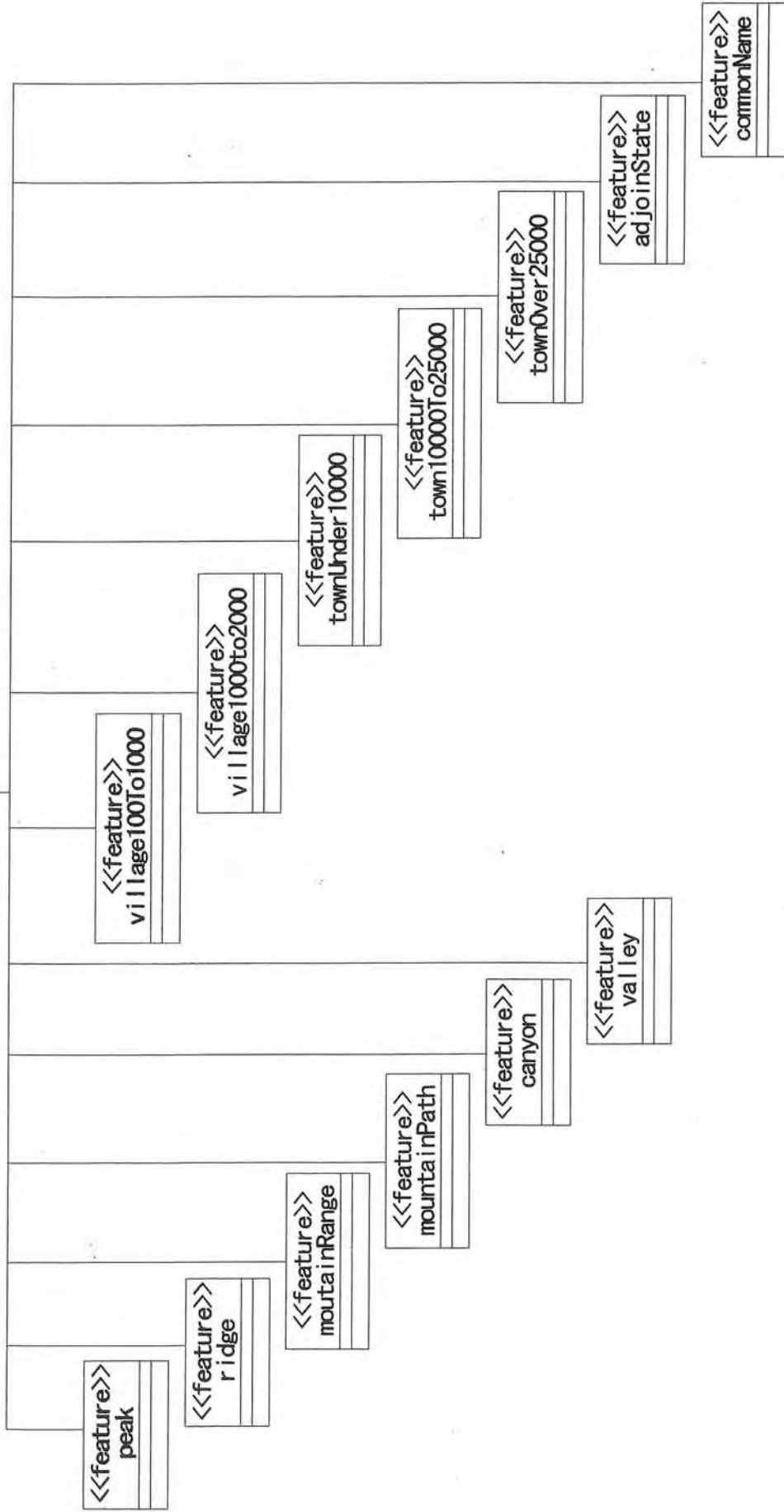
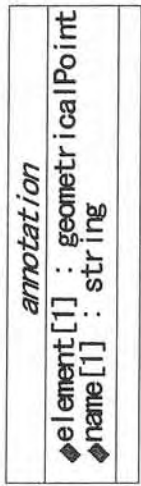


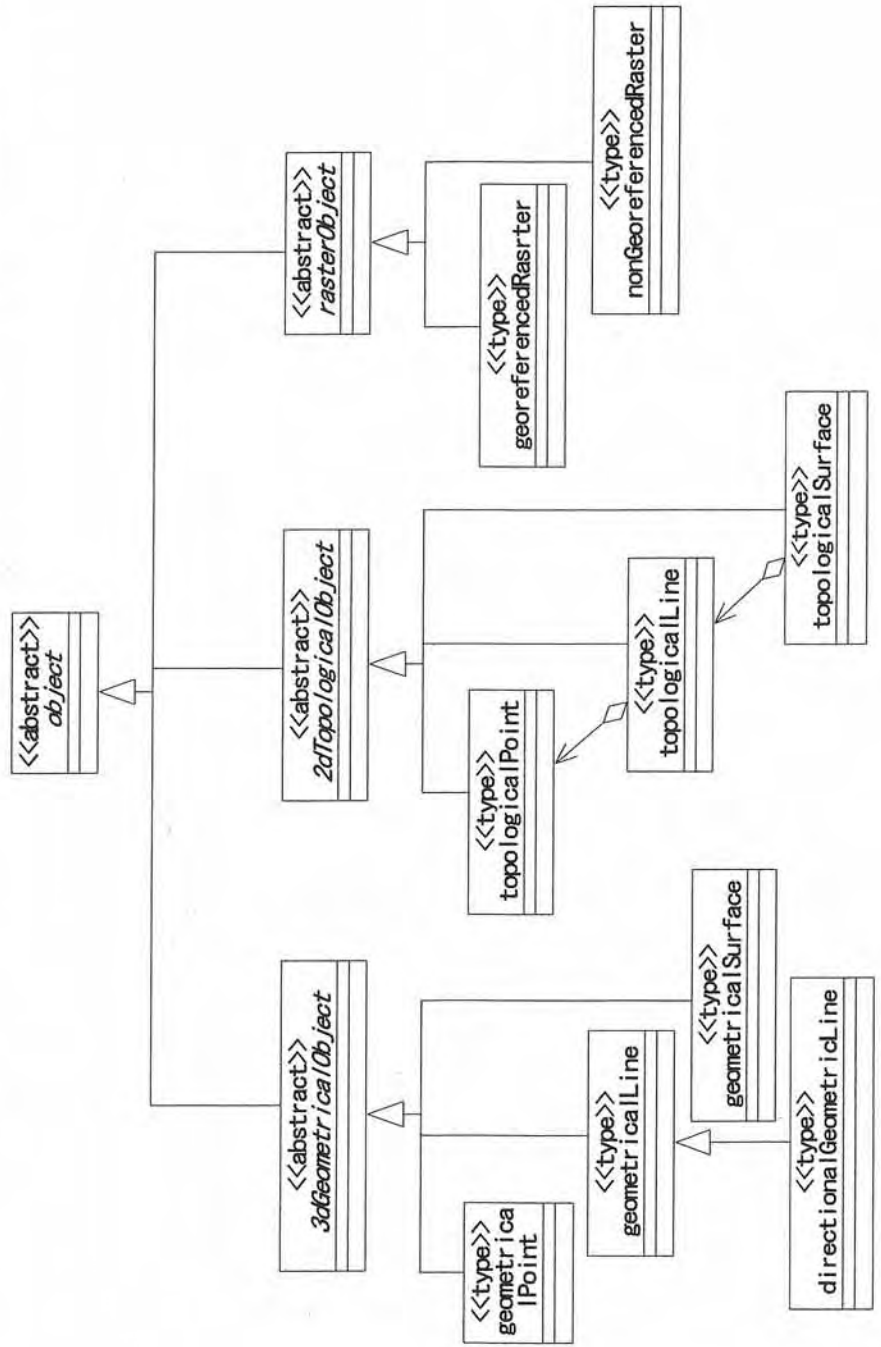
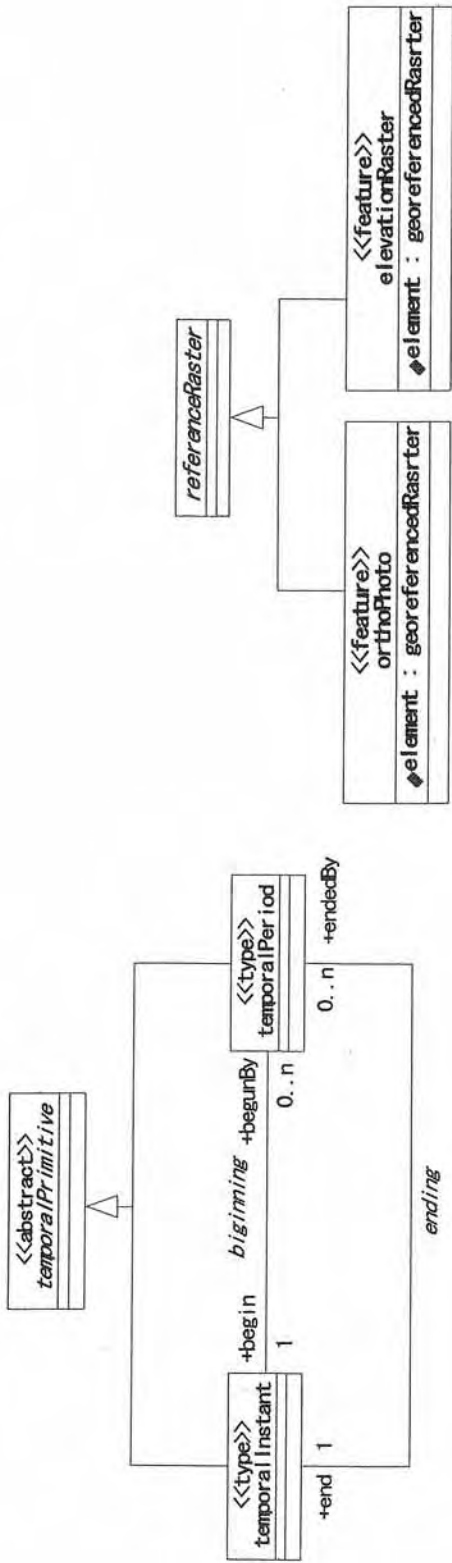












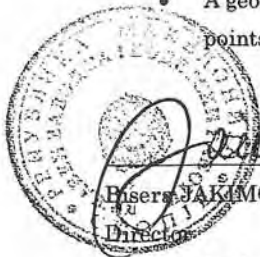
Бр. 01-1899/21
09-07 2004 год.
СКОПЈЕ

MEMORANDUM

July 9th, 2004

The following items are agreed upon between State Authority for Geodetic Works and JICA Study Team for Establishment of State Base maps for GIS in The Republic Macedonia:

1. Reference Ellipsoid is Bessel.
 $a = 6377397.155$ $1/f = 299.1528128156$
2. Projection System is Gauss-Kruger.
3. Meridian of Origin is 21° 00' East of Greenwich.
4. Latitude of Origin is Equator.
5. Scale Factor at origin is 0.9999.
6. False coordinate of origin is 500,000m in Y (False Easting).
7. Unit of measurement is Meter.
8. Sheet size is 7' 30" by 7' 30" for scale 1:25,000.
9. Transformation parameters between WGS1984 (ITRF94) and Bessel are defined in Annex A.
10. Sheet division for each scale is indicated in the attached Figure.
11. Co-ordinates of reference points are listed in Annex B.
12. The following network adjustment procedure should be adhered to:
 - GPS Network shall be adjusted with reference points in the ITRF94 datum based upon results of the EUREF-MACEDONIA-1996 campaign.
 - Co-ordinates shall be transformed to the ETRS89 datum utilizing the results from the above mentioned campaign.
 - Transformation parameters between ETRS89 and State Co-ordinate System (Bessel) shall be estimated from the common 1 order reference points listed in Annex A.
 - A homogenous transformation of photo-control points network to State Coordinate System shall be applied.
 - A geoid model shall be established utilizing leveling data and known heights of existing reference points measured by GPS. Orthometric height determination will be based on this model.



Biserka JAKIMOVSKA
Director

State Authority for Geodetic Works

Satoru NISHIO
JICA Study Team

Sašo DIMESKI

Head of the Sector for Reference Nets
and Photogrammetry
Leader of the SAGW team

Classical 3D Transformation Report

System A	ITRF94_1ORDER	System B	State_Coordinate_MK_1Ord
Ellipsoid:	WGS 1984	Ellipsoid:	Bessel
System:	-	System:	-
		Height mode:	Ellipsoidal

Transformation parameters

Number of common points:	13	Transformation model:	Bursa Wolf
Rotation origin:	X0	0.0000	m
	Y0	0.0000	m
	Z0	0.0000	m

No.	Parameter:	Value	r.m.s.	Unit
1	Shift dX	-521.7476	20.1184	m
2	Shift dY	-229.4892	26.8347	m
3	Shift dZ	-590.9207	27.2453	m
4	Rotation about X	4.02878	0.83514	"
5	Rotation about Y	4.48836	0.93273	"
6	Rotation about Z	-15.52067	0.62468	"
7	Scale	9.7803	2.3394	ppm

Sigma a priori: Sigma a posteriori: 1.0000 0.6053

Residuals m

Cartesian:		dX	dY	dZ
System A	System B			
Babin_Srt_M12	Babin_Srt_M123	-0.4047	-0.1931	-0.2553
Bogoslovec_08	Bogoslovec_0804	-0.8136	-0.6785	-0.9162
Borova_Cuka_	Borova_Cuka_0803	0.2151	0.5632	-0.3757
Busava_Cesm	Busava_Cesma_M12	0.2061	0.2437	0.7395
Crni_Vrv_M113	Crni_Vrv_M113	-0.4420	-0.3003	-0.5019
Dobra_Voda_M	Dobra_Voda_M110	-0.0119	-0.0959	0.5844
Galicica_0807	Galicica_0807	-0.7738	0.5300	-1.1934
Golic_M112	Golic_M112	-0.1830	-0.5481	-0.1165
Kozjak_M104	Kozjak_M104	-0.2374	-0.3944	0.0162
Lisec_M117	Lisec_M117	0.7130	0.3570	0.0692
Ograzden_M11	Ograzden_M119	0.1415	-0.0404	0.1354
Plakenska_P	Plakenska_P_M125	0.4943	0.1669	0.3419
Solunska_Gl_M	Solunska_Gl_M111	1.0963	0.3899	1.4724

Grid:

System A	System B	dE	dN	dH
Babin_Srt_M12	Babin_Srt_M123	-0.0377	0.1042	-0.5039
Bogoslovec_08	Bogoslovec_0804	-0.3241	-0.0116	-1.3625
Borova_Cuka_	Borova_Cuka_0803	0.4354	-0.5582	0.0585
Busava_Cesm	Busava_Cesma_M12	0.1527	0.3688	0.6995
Crni_Vrv_M113	Crni_Vrv_M113	-0.1118	-0.0229	-0.7242
Dobra_Voda_M	Dobra_Voda_M110	-0.0852	0.4669	0.3545
Galicica_0807	Galicica_0807	0.7704	-0.5511	-1.1860
Golic_M112	Golic_M112	-0.4409	0.1632	-0.3555
Kozjak_M104	Kozjak_M104	-0.2773	0.2594	-0.2608
Lisec_M117	Lisec_M117	0.0569	-0.4783	0.6392
Ograzden_M11	Ograzden_M119	-0.0923	0.0253	0.1756
Plakenska_P_	Plakenska_P_M125	-0.0216	-0.0864	0.6173
Solunska_GI_M	Solunska_GI_M111	-0.0371	0.3256	1.8479

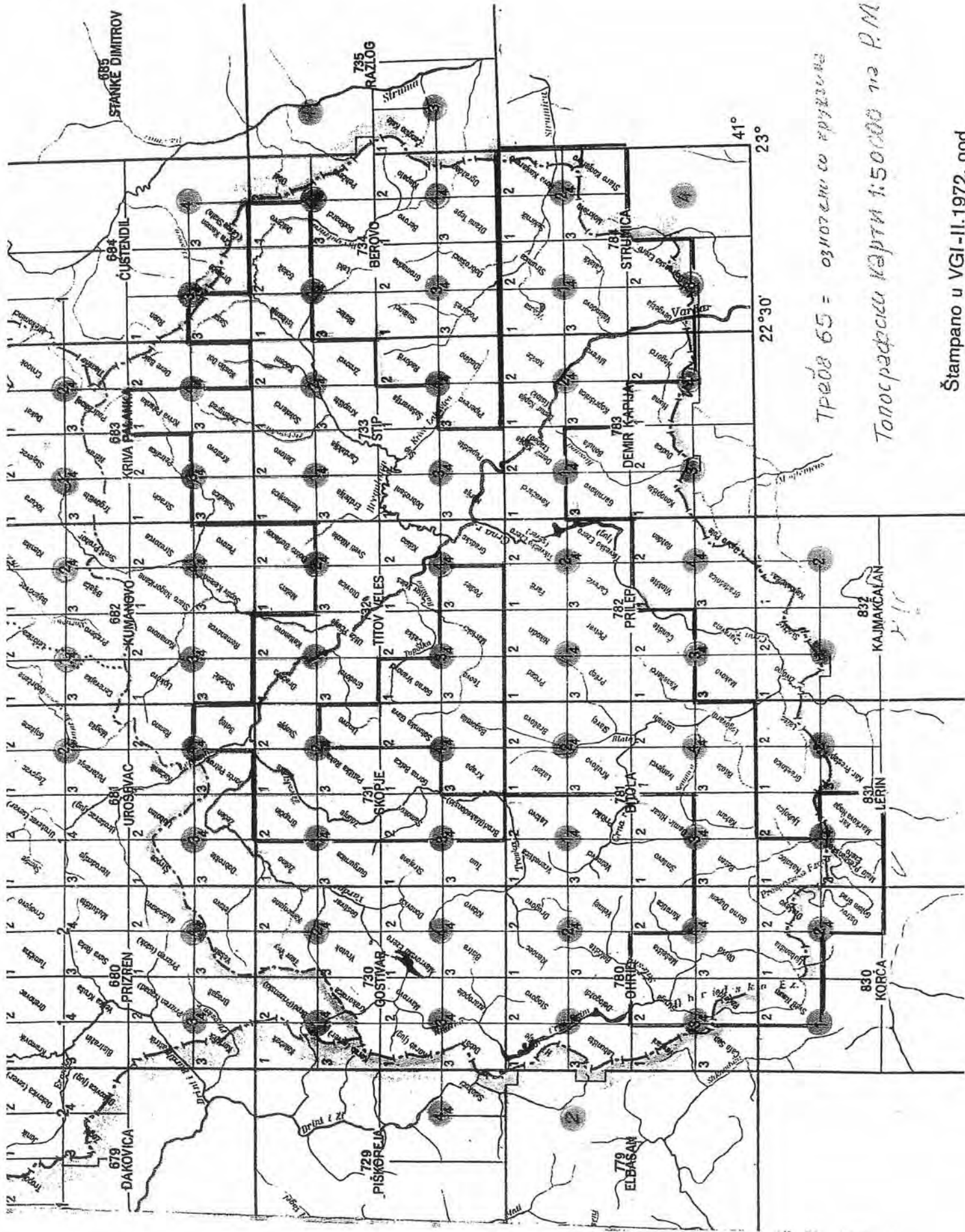
ANNEX B

STATE COORDINATES:

TM 7 ZONE

GAUSS KRUGER PROJECTION

Point Code.	Point Name	Easting	Northing	Elevation	Plate/Benchmark	Type	Remark
MJ01	LJUBANISTA						
MJ02	NAKOLEC						
MJ03	RESEN	501014.236	4546937.904	876.480	Plate	City Net Pillar	Tech. Levelling
MJ04	OHRID PERMANENT	483150.600	4553767.191	731.508	Plate	IGS station	GPS meas./transf.
MJ05	CAFASAN						
MJ06	LAKAVICA						
MJ07	DEBAR	459931.978	4596735.184	644.633	Plate	City Net Pillar	Trig. Levelling
MJ08	BABIN SRT	473829.230	4587458.250	2241.100	Plate	1 LEVEL Pillar	Trig. Levelling
MJ09	VELMEJ						
MJ10	KICEVO	496939.377	4599188.359	649.417	Plate	City Net Pillar	GPS meas./transf.
MJ11	STRAZA						
MJ12	ZIROVNICA						
MJ13	LUKOVO POLE						
MJ14	GOSTIVAR	495617.940	4628383.994	542.665	Plate	City Net Pillar	Precise Levelling
MJ15	TETOVO	500069.614	4652474.546	451.723	Plate	City Net Pillar	Precise Levelling
MJ16	BOZOVICE						
MJ17	ROGACEVO						
MJ18	M.BROD	518350.330	4597070.730	585.440	Plate	City Net Pillar	Trig. Levelling
MJ19	MEDZITLJA						
MJ20	KAJMAKALAN	566726.325	4532265.364	2520.321	Plate	1 LEVEL Pillar	GPS meas./transf.
MJ21	POLCISTE-GRANICA						
MJ22	MARIOVO MANASTIR						
MJ23	BERANCI						
MJ24	MAZUCISTE	541901.897	4579045.843	671.270	Plate	City Net Pillar	Trig. Levelling
MJ25	BUSOVA CESMA	517793.538	4588100.673	1790.842	Plate	1 LEVEL Pillar	Trig. Levelling
MJ26	KECIKAJA	601597.937	4558251.304	2168.659	Plate	1 LEVEL Pillar	GPS meas./transf.
MJ27	GEVGELIJA	629874.395	4555712.201	113.481	Plate	City Net Pillar	Trig. Levelling
MJ28	DOJHRAN	646746.800	4559899.329	217.277	Plate	City Net Pillar	Trig. Levelling
MJ29	UDOVO	621242.567	4579058.327	135.840	Plate	City Net Pillar	Trig. Levelling
MJ30	VITACEVO						
MJ31	PEPELISTE						
MJ32	FARIS						
MJ33	BOGOMILA						
MJ34	VELES	565823.057	4623696.355	372.317	Plate	City Net Pillar	Trig. Levelling
MJ35	NOGAEVCI						
MJ36	VISOKA CUKA	649436.457	4577457.579	1474.801	Plate	1 LEVEL Pillar	GPS meas./transf.
MJ37	NOVO KONJAREVO						
MJ38	VLADEVCI						
MJ39	DVORISTE						
MJ40	KADIICA	663629.280	4629139.715	1932.300	Plate	1 LEVEL Pillar	Trig. Levelling
MJ41	RADOVIS	621662.398	4609566.565	372.045	Plate	City Net Pillar	Trig. Levelling
MJ42	STIP	597747.071	4625783.750	294.3207/294.93	Benchmark/Plate	City Net Pillar	Precise/Trig. Levelling
MJ43	OBOZNA						
MJ44	BOROVA CUKA	654832.937	4652520.883	1217.834	Plate	1 LEVEL Pillar	Trig. Levelling
MJ45	KAMENICA	632775.635	4654261.163	665.370	Plate	City Net Pillar	Trig. Levelling
MJ46	KOCANI	617784.861	4641637.801	367.661	Plate	City Net Pillar	Tech. Levelling
MJ47	KULA						
MJ48	KITKA						
MJ49	PETROVEC	551280.233	4644667.013	232.700	Plate	City Net Pillar	Trig. Levelling
MJ50	SKOPJE	534636.511	4654261.169	316.1928/317.0028	Benchmark/Plate	City Net Pillar	Precise Levelling
MJ51	RAMNO	537308.872	4672102.102	1644.705	Plate	1 LEVEL Pillar	GPS meas./transf.
MJ52	SV. NIKOLE	579740.171	4637034.087	353.881	Plate	City Net Pillar	Trig. Levelling
MJ53	KUMANOVO	562576.699	4664691.695	416.030	Plate	City Net Pillar	Trig. Levelling
MJ54	PROBISTIP	599848.490	4650202.350	535.160	Plate	City Net Pillar	Trig. Levelling
MJ55	GINOVCI						
MJ56	VIROVI	576969.970	4685515.560	1284.580	Plate	1 LEVEL Pillar	Trig. Levelling
MJ57	CUPINO BRDO						
MJ58	DEVEBAIR						
MJ59	GRUPCIN-BOJANE						
MJ60	ASANOVA CESMA						
NEGB	NEGOTINO BASE ST	592225.866	4594592.220	166.927	Plate	City Net Pillar	Precise Levelling



Трѐб 65 = означе на република
 Топографска карта 1:50000 на Р.М.

MEMORANDUM

November 19th, 2004

The following items are agreed upon between State Authority for Geodetic Works and JICA Study Team for Establishment of State Base maps for GIS in The Republic Macedonia:

1. Spatial database data specification:

Macedonia 1:25,000 Spatial Database Data Specification on dated 19th November 2004 will be applied for Photogrammetric plotting and compilation.

2. Carry out aerial triangulation by SAGW:

SAGW will carry out following part of digital aerial triangulation for the project until beginning of next phase on January 2005.

- Manual tie point observation
- Manual control point observation
- Manual leveling point observation
- Complete backup of photogrammetric dataset

3. List of Triangulations Points to represented in the GIS database and on the printed map:

A complete list of Triangulations Points in EXCEL with relevant attribute should be compiled by SAGW. Milestone of delivery is end of February 2005.

Positions of first order Leveling Benchmarks might be recorded during the stage of supplementary field survey.

4. SAGW will issue an official letter to ESM to get adequate information about the Electricity Supply Network of Macedonia. The following information should be compiled by SAGW in collaboration with ESM:

- Name and Identifier number of high-voltage power line
- Voltage category
- Coordinates of pylons

Existing Shape files provided by ESM might be utilized for new power lines.

Priority should be given to the First Order Power Supply Grid in areas covered by the mapping project.

Coordinate information and attributes should be compiled in EXCEL spread sheets.

Deadline for final data delivery is end of May 2005.

5. Remaining field survey portions (OJT):

SAGW should finish the remaining 7 map sheets as soon as possible.

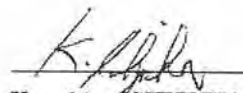
However, there is a mutual understanding between JICA and SAGW that work might prolong due to bad weather conditions in the mountain regions.

6. Approval of annotation to be represented on Topographical Maps 1:25000:
SAGW will collect and classify the official names to be represented on the 89 maps and in the GIS database. Official names represented in the GIS database must be coherent and unified.
The use of fonts, Latin or Cyrillic, must be decided by SAGW.
Final data set, consisting of fonts and official names recorded in EXCEL spread sheets, should be submitted JICA study team by the end of February 2005.
7. Classification of Roads and Infrastructure and other information related to the transport network:
SAGW will collect information about road classification from The Institution for Road Management. Further discussions about classification will be held in January 2005 between the JICA study team and SAGW.
8. Arrangement and approval of official names collected during the first phase of field survey:
Official names represented in the GIS database must be coherent and unified.
Final data set, consisting of fonts and official names recorded in EXCEL spread sheets, should be submitted JICA study team as soon as possible.
9. Boundaries of National Parks:
SAGW should collect adequate information from Ministry of Environment and other sources such as cadastre records.
Further discussions about data arrangement will be held in January 2005.
10. Classified Specimen for Annotation, map sheet GRUPCIN-174-1-2.
JICA Study team received the classified specimen from SAGW.



Saso DIMESKI

Head of the Sector for Reference Nets
and Photogrammetry
Leader of the SAGW team


Kazuhiro ISHIZUKA
JICA Study Team

Ep. 01-1899/33
 22-11-2004
 СКОПЈЕ

MEMORANDUM

November 22th, 2004

In order to successfully complete the first phase of the Study for Establishment of State base maps for GIS in the Republic of Macedonia, JICA Study Team would like to ask for assistance from SAGW to store some parts of the equipment that was brought during the first and second phase of the project.
 In Addition to this we would like to point out that SAGW will be free to use the equipment for training purposes during our absence.
 The management and utilization of the stored equipment will be the full responsibility of SAGW.

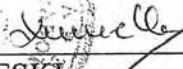
1. Period
 22.10.2004 – 10.01.2005

2. Specification of equipment:

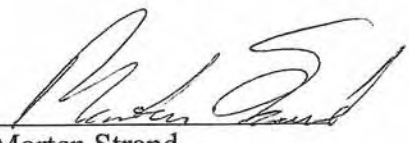
Leica GPS GX1200 complete set (S/No 452495)	1 set
Leica GPS GX1200 complete set (S/No 452493)	1 set
Leica GPS GX1200 complete set (S/No 452485)	1 set
Leica GPS GX1200 complete set (S/No 452419)	1 set
Leica GPS GX1200 complete set (S/No 452487)	1 set
Leica GPS GX1200 complete set (S/No 452491)	1 set
Leica Tripod Type GST05L	6 sets
Battery Charger GKL221 (S/No 0003524)	1 set
Battery Charger GKL221 (S/No 0003523)	1 set
Battery Charger GKL221 (S/No 0003537)	1 set
Battery Charger GKL221 (S/No 0003279)	1 set
Battery Charger GKL221 (S/No 0003522)	1 set
Battery Charger GKL221 (S/No 0003527)	1 set
Software: Leica Geo Office upgrade	2 sets
Software: Leica Ski-Pro(for GPS)+ SW dongles	2 sets
Software: MS-Office 2003	3 sets
Projector: Epson EMP-74(S/No.FVVG420559F)	1 set
PC: IBM Think Pad R50(S/No.99F-8119, 8105)	2 sets
Leveling staff SUN-33	3 sets
Tripod	6 sets
Battery	6 sets
Battery charger	6 sets
Philips Water Boiler	1 sets
“Tsudas Rice Cooker”	1 set
Hard Disk I-O Data 500GB	1 set
HP PSC 1210 Printer	2 sets
Trunks containing office material	2 sets
Image station SW JICA001	1 box
Image station SW JICA001	1 box
Canon SW IRC3200N	1 box
OCE CS 4300 SW	1 box
Epson SW	1 box

HP 5500 SW	1 box
HP 1055 SW	1 box
JICA2KSVR SW	1 box
JICA 001-009 SW(Operating system)	9 boxes
Adobe Photoshop CS	3 boxes
Mac Office	2 boxes
Intergraph documentation	2 boxes
TNT MIPS Software dongles	2 sets
OCE documentation	1 set
Symantec Antivirus SW	2 boxes

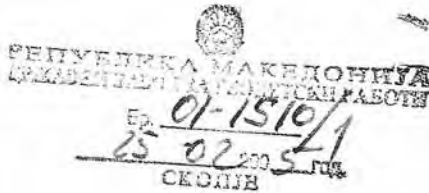




Sašo DIMESKI
 Head of the Sector for Reference Nets
 and Photogrammetry
 Leader of the SAGW team



Morten Strand
 JICA Study Team



MEMORANDUM

February 25th, 2005

The following items are agreed upon between State Authority for Geodetic Works and JICA Study Team for the Establishment of Environmental GIS for the Lake Ohrid Watershed:

- *Collect remaining information for the implementation of the Environmental GIS for the Lake Ohrid Watershed according to request letters issued by State Authority of Geodetic Works:*

1. *Public Enterprise Proaqua Struga*
2. *Public Enterprise Proleter Resen*

Digital data or plans showing the following

Sewage and drainage systems:

- Main sewage and collector system
- Main drainage system
- Facilities for sewage and drainage
- Urban areas covered by the system
- Statistical data about the coverage of drainage and sewage systems related to name of village, location etc.

Water resources:

- Protected areas for water supply
- Facilities related to water supply

Environmental hotspots:

- Industrial hotspots and areas that are contaminated and considered to be a hazard for the local environment.

3. *Hydro Biological Institute Ohrid*

- Statistical data of limnology (annual report in **digital form**)
- Data of physicochemical investigations (annual report in **digital form**)

4. *National Institution Institute for Protection of The Monuments of Culture And Museum*
5. *Academy of Science and Art*

Maps and relevant information about :

- Registered cultural heritage sites under protection of the government in the Ohrid and Prespa area.

- descriptive data should as far as possible be geo-referenced using available cadastre records
- data should contain Name and Category and Period

Category is:

- archeological site
- house
- church
- mosque
- monument

6. *Hydro Meteorological Institute*

- Digital data for water quality monitoring of rivers in the watershed area (data from RIMSYS).
- Statistical data about climate for the weather stations in the region

7. *State Department of Statistics*

8. *Tourism, Local government Ohrid and Resen*

- Statistical data about tourism.
- descriptive data and facilities of accommodation should as far as possible be geo-referenced using available cadastre records

9. *Ministry of Environment and Physical Planning*

- Boundary or location of natural rarity, including Name and Type
- Boundary of regulated area along the Lake Ohrid (General plan of Ohrid and Struga Municipality)
- Administrative boundary of RAMSAR area of Prespa Lake, protected wetland area for birds

10. *Ministry of Agriculture, Forest and Water Economy*

- Digital GIS-data of forest types for the watershed area (shape file format with database tables)
- Digital GIS-data of watershed boundaries.



Saso DITALESKI
Head of the Sector for Reference Nets
and Photogrammetry
Leader of the SAGW team

Morten STRAND
JICA Study Team



РЕПУБЛИКА МАКЕДОНИЈА
ДРЖАВЕН ЗАВОД ЗА ГЕОДЕТСКИ РАБОТИ

Бр. 08-3639/1

24-05- 2005 год.

С К О П Ј Е

ДО: ЈСА студискиот тим
- г.дин Акира Нишимура -

ПРЕДМЕТ: Потврда за прием на материјали

Државниот завод за геодетски работи потврдува дека на ден 20.05.2005 год., од ЈСА студискиот тим, ги прими следните материјали како резултат од досегашните активности во рамките на реализацијата на проектот "Студија за изготвување на Основна државна карта за ГИС на Република Македонија" :

Аерофотограметрија

- Негатив филм ... 1 сет
- Дијапозитив филм ... 1 сет
- Контакт-копии ... 2 сета
- Индекс-карта на аерофотографиите ... 1 сет
- Дигитални податоци од аерофотографиите ... 2 сета

Одредувањето на фото-контролните точки

- Резултати од одредувањето на фото-контролните точки ... 2 сета

Аеротриангулација

- Резултати од аеротриангулацијата ... 2 сета

Со почит,



ДИРЕКТОР
Бисера Јакимовска



**REPUBLIC OF MACEDONIA
STATE AUTHORITY FOR GEODETIC WORKS**

Nr. 09-5352/1

05-08- 2005 god.

SKOPJE

**TO: JAPAN INTERNATIONAL COOPERATION AGENCY
Attn: Mr. Okazaki Yuji
Managing Director
Social Development Study Department
Shinjuku Maynds Tower Bldg., 7F,
2-1-1, Yoyogi, Shibuya-Ku, Tokyo, 151-8558
JAPAN**

**RE : THE STUDY FOR ESTABLISHMENT OF STATE BASE MAPS
FOR GIS IN THE REPUBLIC OF MACEDONIA**

Dear Mr. Okazaki,

According to the Minutes of Meeting on The Study for Establishment of State Base Maps for GIS in the Republic of Macedonia, Macedonian side requested JICA that the equipment that is being used during the implementation of the study by the JICA Study Team should be donated to The State Authority for Geodetic Works after the completion of the study.

This will enable The State Authority for Geodetic Works to utilize the equipment for finishing the mapping work in The Republic of Macedonia and also for executing other geodetic works that are currently pending.

Your kind consideration on this matter will be highly appreciated.

Enclosed herewith please find the list of the equipment.

Sincerely yours,

**Bisera Jakimovska
Director,
State Authority for Geodetic Works**

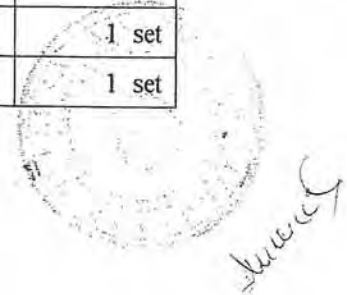


The list of equipments

1	SKI-Pro (GPS data analysis software)	2 sets
2	IBM ThinkPad R50 personal computer with additional memory, mouse and Office 2003 standards software	4 sets
3	EPSON EMP-74 projector	1 set
4	Digital Plotting System Dell Precision 650 PC Workstation	2 sets
5	Digital Plotting System P1130 Dell 21 inch CRT	4 sets
6	Digital Plotting System Smart-UPS 1500E (APC)	2 sets
7	Digital Plotting System Image Station SSK software (Z/I Imaging)	2 sets
8	Digital Plotting System ISAT2000 software (Z/I Imaging)	1 set
9	Digital Plotting System ISAE software (Z/I Imaging)	2 sets
10	Digital Plotting System ISOP software (Z/I Imaging)	2 sets
11	Digital Plotting System Micro Station Driver (Z/I Imaging)	2 sets
12	Digital Plotting System I/RASC software (Z/I Imaging)	2 sets
13	Digital Plotting System Micro Station V8(E) (Bentley)	2 sets
14	Digital Plotting System MS-Office 2003 Professional(E) (Microsoft)	2 sets
15	Digital Edition System Dell Precision 670 PC Workstation	3 sets
16	Digital Edition System 2000FP Dell 20 inch LCD	6 sets
17	Digital Edition System Smart-UPS 1500E (APC)	3 sets
18	Digital Edition System TNT Mips M50 software (Microimages)	3 sets
19	Digital Edition System TNT Mips P15 Plotter Driver (Microimages)	3 sets
20	Digital Edition System TNT Mips SDK3 Device Kit (Microimages)	3 sets
21	Digital Edition System MS-Office 2003 Professional (E) (Microsoft)	3 sets
22	Digital Editing System for Printing Machintosh G5 PC Workstation (Apple)	2 sets
23	Digital Editing System for Printing 20 inch cinema display (Apple)	2 sets
24	Digital Editing System for Printing EPSON 10000XL A3 flat scanner	1 set
25	Digital Editing System for Printing Smart-UPS 1500E (APC)	2 sets
26	Digital Editing System for Printing Illustrator CS software (Adobe)	2 sets
27	Digital Editing System for Printing Photoshop CS software (Adobe)	2 sets
28	Digital Editing System for Printing Font for printing	10 sets
29	Digital Editing System for Printing MS-Office 2003 Professional (E) for Mac (Microsoft)	2 sets
30	Application of GIS Dell precision 670 PC computer	1 set
31	Application of GIS 2000FP 20 inch LCD (Dell)	1 set



32	Application of GIS	Smart-UPS 1500E (APC)	1 set
33	Application of GIS	ArcGIS Arc/Info software (ESRI)	1 set
34	Application of GIS	ArcGIS Spatial Analyst Extension software (ESRI)	1 set
35	Application of GIS	ArcGIS 3D Analyst Extension software (ESRI)	1 set
36	Application of GIS	ArcGIS Arc SDE software (ESRI)	1 set
37	Application of GIS	ArcGIS Arc IMS software (ESRI)	1 set
38	Application of GIS	MS-Office 2003 Professional (E)(Microsoft)	1 set
39	Others, Film scanner	Photoshop CS software (Adobe)	1 set
40	Others, Film scanner	Ultra Scan 5000 (Vexcel Imaging)	1 set
41	Others, Film scanner	Manual Film Roll Unit (Vexcel Imaging)	1 set
42	Others, Film scanner	Dell precision 670 PC computer	1 set
43	Others, Film scanner	2000FP 20inch LCD (Dell)	1 set
44	Others, Film scanner	Smart-UPS 1500E (APC)	1 set
45	Others, Map scanner	Couger TX36 map scanner (OCE)	1 set
46	Others, Map scanner	Carrying sheet	1 set
47	Others, Map scanner	TWAIN (OCE) Map scanner Driver	1 set
48	Others, Ink Jet Plotter	Designjet 1055CM plus (HP) Ink Jet Plotter	1 set
49	Others, Ink Jet Plotter	Additional Memory	1 set
50	Others, Ink Jet Plotter	Supply hp 80 value pack (HP) Ink (Black, Cyanogens, Red, Yellow) C6810A (HP) Paper	4 sets 10 sets
51	Others, Laser printer	Color Laser Jet 5500dn (HP) Laser printer	1 set
52	Others, Laser printer	Additional memory	1 set
53	Others, Layer 3 switch	Allied Telesyn Rapier-24 Hub port	1 set
54	Others, Layer 3 switch	Network cable	13 sets
55	Others, File sever	Power Edge 4600 (DELL)	1 set
56	Others, File sever	E151F (DELL) 15 inch LCD	1 set
57	Others, File sever	Smart-UPS 1500E (APC)	1 set
58	Others, File sever	Backup Exec Advanced Server Edition (Veritas) software	1 set
59	Others, File sever	SQL Server 2000 (Microsoft) Database Engine	1 set
60	Others, File sever	AntiVirus Corporate Edition for Workstation (Symantec) Anti Virus Software	1 set
61	Others, File sever	AntiVirus 9.0 for Mac (Symantec) Anti Virus software	1 set
62	Others, Copy machine	Canon IRC3200 Canon Copy machine	1 set



63	Others, Copy machine	Spare Ink	20 sets
64	GPS System	Leica GX1220 Geodetic GPS dual frequency receiver	8 sets
65	GPS System	Leica AX1202 dual frequency antenna	8 sets
66	GPS System	2.8m antenna cable	8 sets
67	GPS System	RX1210T, System 1200 Controller	8 sets
68	GPS System	GEB221 4Ah plug-in, rechargeable Li-Ion battery	16 sets
69	GPS System	GKL221, Charger PRO	8 sets
70	GPS System	GD1221, Adapter for GKL1221 for charging 2Li-Ion batteries	16 sets
71	GPS System	MCF32, Compact flash card 32MB	8 sets
72	GPS System	MCFAD1, Compact Flash PC card adapter	3 sets
73	GPS System	Hard container for GX1210/GX1220/GX1230 receiver	8 sets
74	GPS System	Aluminum-Tripod GST05L, telescopic with accessories	8 sets
75	GPS System	GDF112 tribranch with optical plummet	8 sets
76	GPS System	GRT146 carrier with 5/8" screw	8 sets
77	GPS System	Height hook with integrated tape measure	8 sets
78	GPS System	Leica Geo Office Upgrade software	2 sets
79	Leveling	DNA10 digital level	2 sets
80	Leveling	GEB111 batteries	2 sets
81	Leveling	GEV102 data transfer cable Lemo-0/RS232	2 sets
82	Leveling	PCMCIA-ATA flash card 16MB	2 sets
83	Leveling	Aluminum-Tripod GST05L	2 sets
84	Leveling	Dual face leveling staff GKNI 4M	4 sets
85	Leveling	Level data processing and analysis LGO software	2 sets
86	Leveling	Design & adjustment 1D for level data LOG software	2 sets

Memorandum

September 22nd, 2006

The following items were agreed upon between the State Authority of Geodetic Works and the JICA Study Team:

1. Copyright on topographic maps and various types of topographic map data
The copyright on the 1:25,000 scale topographic maps and various types of topographic map data of the same scale produced in the Study shall belong to the State Authority of Geodetic Works and JICA.
2. Modification and addition to topographic maps and various types of topographic map data
JICA agreed to allow the State Authority of Geodetic Works to modify or/and update the topographic maps and various type of topographic map data produced in the Study and use them for any purposes.
3. Use of topographic maps and various types of topographic map data
The State Authority of Geodetic Works agreed to allow the use of the topographic maps and various types of topographic map data produced in the Study in other JICA projects without charge.
4. Copyright notification
JICA agreed to specify in writing to the effect that the State Authority of Geodetic Works holds the copyright on the topographic maps and various types of topographic map data produced in the Study.
5. Use of topographic maps and various types of topographic map data
The State Authority of Geodetic Works agreed to allow the use of the followings topographic maps and various types of topographic map data produced in the Study for the purposes of Zletovica Basin Water Utilization Improvement Project without charge.

The sheets numbers : 683-3-3, 683-3-4, 683-4-3, 732-2-3, 732-2-4, 733-1-1, 733-1-2, 733-1-3, 733-1-4, 733-2-1, 733-2-2, 733-2-3, 733-2-4, 732-4-1, 732-4-2, 732-4-4, 733-3-1, 733-3-2, 733-3-3, 733-3-4, 733-4-1, 783-1-1, 783-1-2.



LJUPCO GEORGIEVSKI
Director
State Authority of Geodetic Works
(SAGW)

西村 明

AKIRA NISHIMURA
Leader
JICA Study Team