
**Implementation of Data Alignment Measures
for the Alignment
of Planning, Lands and Public Works Data**

**Final Report (Volume 2F)
Inventory of GIS Maps**

March 2004

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Volume 2F – Inventory of GIS Maps

Table of Contents

1	Introduction.....	1-1
1.1	Purpose.....	1-1
1.2	Map Inventory	1-1

1 Introduction

1.1 Purpose

- 1.1.1 CSWP is a CAD standard for Works Projects. Between CAD and GIS applications, PDs shall have the autonomy to choose their own symbols for their specific presentation purpose. Re-symbolisation is not considered as part of a conversion process, but rather, re-symbolisation is part of the design, development, and production processes for maps and drawings. It is not mandatory for PDs to adopt the symbology standards defined by source agent (e.g. Data Owners for Common Spatial Unit, CSU).
- 1.1.2 For the benefit of the Data Users who might want to reproduce the symbols from the data source agencies, information about the symbol specification from the data source agencies (e.g. Data Owners for CSU) to depict the exchanged datasets should be made available when requested by the Data Users. Map-producing PDs should produce their own departmental symbol specification and make it available for other PDs' reference.
- 1.1.3 This document would be the draft version of the Practice Note which advises on the inventory of the GIS Maps currently prepared by various map producing PDs and the associated GIS platforms (including the software and version) on which the various symbols are currently supported.
- 1.1.4 This Practice Note shall be read in conjunction with HPLB TC No. xx/xx and ETWB TC No. xx/xx.

1.2 Map Inventory

- 1.2.1 PDs are grouped into four categories based on the kind of cartographic symbologies used in their business processes. They are:
 - (a) Category I - Non-Map or Drawing Producer: LR does not process CAD or GIS data. BD and RVD will soon launch their GIS, but they will not be map producing PDs. None of these PDs would have symbols to include in a GIS-based cartographic symbol inventory.
 - (b) Category II - CAD Drawings Producer: The Works Departments have adopted the CSWP standard to produce drawings in Works projects delivery. The CSWP also applies to all ETWB projects undertaken by their consultants. Some Works Departments also have their own GIS systems. These Category II PDs might also be Category III or IV as well.
 - (c) Category III- GIS Map Producer without Standard Symbols: Some PDs are producing GIS maps to meet their operational needs, but have not

established standard map products for wider distribution. These departments tend to produce special purpose, one-time maps solely for internal use. For example, C&SD produces the maps for supporting the fieldwork of population censuses/by-censuses and household surveys. Departments that create unique symbols would be responsible for maintaining any information for their own symbols internally. Since no other departments use these symbols, symbols that are created strictly for internal map creation to support specific business needs should not be included in the inventory evaluation. It should be noted, however, that many of the PDs that fall into Category III typically adopt the LandsD Base Map 1:1,000 symbology to represent topographic features.

- (d) Category IV - GIS Map Producer with Standard Symbols: These PDs use GIS to produce standardized map products based on their own established symbology standards. LandsD and PlanD are departments that use their GIS to produce standardized maps that are that are that are widely accepted and broadly used by other PDs for many years.

1.2.2 There are some departments who fall into more than one category

1.2.3 An inventory of standard maps produced by Category IV - GIS Map Producer PDs (with standard symbols) was prepared. The inventory contains a list of PDs, and their created map styles and map series names. The term 'map style' is used to describe the overall purpose of the map. The term 'map series' refers to particular "map product line" produced by a PD. For the purpose of this inventory, a map series is produced at a specific scale with a specific thematic content.

1.2.4 Altogether there are a total of 9 map styles or 23 map series that were inventoried and listed in Table 1. Each map style is for a specific business purpose of a PD and of each map style, there might have more than one map series which are scale dependent.

1.2.5 Also included in the table is a map series ID. This unique identifier is associated with a particular map series of a map style. The map series ID is made up of the department name and a number. A theme consists of similar geospatial features typically portrayed together with identical or similar cartographic symbols in the maps.

1.2.6 Among the map producing PDs, the Survey and Mapping Office (SMO) of LandsD is responsible for maintaining a set of digital topographical geospatial datasets. These datasets cover the whole territory of Hong Kong. They were basically converted from the original 1:1,000 scale survey sheets, and are continuously up-dated. The corresponding digital map products are being extensively used in PDs (including LandsD) and many other Government departments for various purposes.

1.2.7 The software commonly used by PDs for map production are as follows:

- (a) Arc/Info 6.x;
- (b) Arc/Info 7.x;
- (c) Arc/Info 8.x (i.e. ArcGIS: ArcView 8, ArcEditor 8, and Arc/Info Workstation 8);
- (d) ArcView 3.x; and
- (e) Microstation J.

1.2.8 The symbols used on the map of a given map series of a map style is software dependent and also version dependent. The inclusion of details of various GIS software products and the version in the map inventory list could add useful information for symbol reproduction purpose.

1.2.9 PDs shall keep DAM Management Committee updated if there is any change to the map inventory documented in Table 1.

Department Symbol Specification

1.2.10 For the benefit of the Data Users who might want to reproduce the symbols from the data source agencies, information about the symbol specification from the data source agencies (e.g. Data Owners for CSU) to depict the exchanged datasets should be made available when requested by the Data Users. Map-producing PDs should produce their own departmental symbol specification and make it available for other PDs' reference.

1.2.11 The Map Producing PDs should have their department symbol specification ready by June 2004.

PDs	Map Series	Map Series ID	Map Style	Scale	GIS Platform
LandsD	Base Map (B1000)	LandsD_M_01	Topographic Map	1:1,000	Arc/Info 7.2.1
LandsD	Base Map (B5000)	LandsD_M_02	Topographic Map	1:5,000	Arc/Info 7.2.1
LandsD	Base Map (B10000)	LandsD_M_03	Topographic Map	1:10,000	Arc/Info 7.2.1
LandsD	Base Map (B20000)	LandsD_M_04	Topographic Map	1:20,000	Arc/Info 7.2.1
LandsD	Land Status Plan	LandsD_M_03	Land lot status	1:1,000	Arc/Info 7.2.1
PlanD	Layout Plan	PlanD_M_01	Detailed layout plan	1:500	MicroStation J
PlanD	Layout Plan	PlanD_M_02	Detailed layout plan	1:1,000	MicroStation J
PlanD	Outline Development Plan	PlanD_M_03	Development plan	1:2,500	MicroStation J
PlanD	Outline Development Plan	PlanD_M_04	Development plan	1:5,000	MicroStation J
PlanD	Outline Development Plan	PlanD_M_05	Development plan	1:10,000	MicroStation J
PlanD	Outline Zoning Plan	PlanD_M_06	Town Planning	1:2,500	Arc/Info 8.0.2
PlanD	Outline Zoning Plan	PlanD_M_07	Town Planning	1:5,000	Arc/Info 8.0.2
PlanD	Outline Zoning Plan	PlanD_M_08	Town Planning	1:7,500	Arc/Info 8.0.2
PlanD	Outline Zoning Plan	PlanD_M_09	Town Planning	1:10,000	Arc/Info 8.0.2
PlanD	Outline Zoning Plan	PlanD_M_10	Town Planning	1:20,000	Arc/Info 8.0.2
PlanD	TPU/SB Plan	PlanD_M_11	Census geography	1:5,000	Arc/Info 7.2.1
PlanD	TPU/SB Plan	PlanD_M_12	Census geography	1:10,000	Arc/Info 7.2.1
PlanD	TPU/SB Plan	PlanD_M_13	Census geography	1:15,000	Arc/Info 7.2.1
PlanD	TPU/SB Plan	PlanD_M_14	Census geography	1:20,000	Arc/Info 7.2.1
PlanD	TPU/SB Plan	PlanD_M_15	Census geography	1:50,000	Arc/Info 7.2.1
CED	Slope Feature Plan	CED_M_01	Slope features (for CED)	1:5000	MicroStation J
WSD	Slope Record Plans	WSD_M_01	Slope features (for WSD)	1:1,000	ArcView 3.2.a

PDs	Map Series	Map Series ID	Map Style	Scale	GIS Platform
WSD	Water Main Record Plans	WSD_M_02	Water main features	1:1,000	Arc/Info 7.2.1

Table 1 Inventory of Map Series Produced by PDs