

November 1996

**Planning, Environment and Lands Branch Technical Circular No. 3/96**

**Works Branch Technical Circular No. 20/96**

**Documentation for Digital Geographic Data**

**Introduction**

This Circular advises on the documentation requirements for Digital Geographic Data in the various Geographical Information Systems (GIS) in the departments of the Works Branch and the Planning, Environment and Lands Branch. The requirements shall consist of a catalogue as per Appendix A and the metadata documentation conforming to American Society for Testing and Materials (ASTM) Specification, “**Content of Digital Geospatial Metadata**”. It is agreed by the Secretary for Works and the Secretary for Planning, Environment and Lands and will apply to both groups of departments.

2. This Circular shall be read in conjunction with **PELB TC 2/96** or **WB TC 19/96**, “Administration of Digital Geographic Data”.

**Definitions**

3. For the purpose of this Technical Circular, **Digital Geographic Data** shall be the same as **Digital Geospatial Data** used in the ASTM standards.
4. **Metadata** is the data about the data, and covers the content, quality, condition, and other characteristics of data.
5. **Content of digital geospatial metadata** shall be the information content of metadata for a set of digital geographic data.
6. **Catalogue of Geographical Information Systems** shall be a catalogue containing high-level information pertinent to the particular GIS.

**Background**

7. There has been a growing number of GISs installed in W-PELB departments. Many more are still forthcoming and at different stages of system developments. Many systems are tasked with the business functions for management of inventory and facilities responsible by departments. As the digital geographic data would be very costly to collect and refine, it is important for public interests that it should be made available and shared among different

government departments as far as possible. Where possible, sharing of digital geographic data with private bodies will also be pursued with greater vigour in future.

8. Pursuant to PELB TC 3/93 or WB TC 33/93, "Catalogue of Digital Geographically-referenced Data", many W-PEL departments have already prepared a catalogue showing what GISs have already been installed. The catalogue provides an overview on what kind of information is contained in the GIS.

9. To facilitate data sharing, proper metadata should be prepared so that users may come to know what data is contained in the system, and also if and how it can be shared and reused. In this connection, many countries overseas have long recognised this initiative and made considerable efforts to determine the metadata standards. The standard by ASTM is probably one of the most widely used so far.

10. The major use of the metadata will then enable<sup>1</sup>:-

- a) maintenance of an organization's internal investment in digital geographic data;
- b) provision of information about an organization's data holdings to data catalogues, clearinghouses, and brokerages, and
- c) to provide information needed to process and interpret data to be received through a transfer from an external source.

11. The metadata standard will serve to provide a common set of terminology and definitions for concepts related to the metadata. It should be independent of software and hardware platforms and should cover the four roles played by the metadata as below:-

- a) *availability*:- if the sets of data existing for a geographic location;
- b) *fitness for use*:- if a set of data meets a specific need;
- c) *access*:- how to acquire an identified set of data; and
- d) *transfer*:- how to process and use a set of data

### **Policy**

12. All GISs in W-PEL departments shall be complete with the proper documentation to facilitate sharing and re-use of digital geographic data. This policy is amplified by the following procedures that all GIS:-

- a) which are acquired after 1 August 1996, shall be complete with a set of metadata documentation prepared as per ASTM Section D5714-95, "**Content of Digital Geospatial Metadata**".

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<sup>1</sup> ASTM Section D5714-95, "**Content of Digital Geospatial Metadata**"

- b) which were acquired in W-PELB departments before 1 August 1996, shall be complete with the covering metadata documentation two years after the promulgation of this Circular.
- c) shall be complete with the Catalogue of Geographical Information System as per Appendix A to this Circular.

13. The GIS Manager, as appointed vide PELB TC 2/96 or WB TC 19/96, shall be responsible for preparation of the metadata documentation and the Catalogue of Geographical Information System for the GISs under his control, and shall deposit the same at Land Information Centre (LIC) of Lands Department. The documentation shall be made available on demand to W-PELB departments, private sector organisations and individuals interested in further use of the data unless the system contains data which is sensitive and confidential in nature. In such cases, the Code on Access to Information shall be relevant.

14. All documentation for Digital Geographic Data in departments should be reviewed and updated no less than every 6 months or upon major amendments so as to ensure that it is as current as possible.

15. A review on the requirements covered in this Circular will be conducted one year after the promulgation of this Circular or upon completion of the first set of the documentation whichever the sooner.

**( Bowen Leung )**  
**Secretary for Planning,**  
**Environment and Lands**

**( H. S. Kwong )**  
**Secretary for Works**

**Format for Catalogue of GIS**

<b>Owner</b>	Institution/Department/Company
<b>Item Name</b>	Short GIS name, <i>e.g. Computerised Land Information System (CLIS)</i>
<b>Descriptions</b>	Function of the GIS, <i>e.g. to maintain information of 1:1000 scale topographical map</i>
<b>GIS Manager</b>	Post: address, telephone, fax number, e-mail address, <i>e.g. CLS/LIC, Room 1501, 15/F, Murray Building, Hong Kong, Tel. 2848 6136, Fax. 28778520</i>
<b>GIS Administrator</b>	Post: address, telephone, fax number, e-mail address
<b>Sources</b>	source(s) of the data in the GIS system, <i>e.g. 1:1000 survey sheets, field survey</i>
<b>System Platform</b>	technology description, information of hardware, software and operation system
<b>Item Identifier(s)</b>	list the objects/identifiers in the dataset(s), <i>e.g. address, lot ID</i>
<b>GIS Coverage</b>	extent of data, state boundaries, <i>e.g. whole territory</i>
<b>Users</b>	Primary User, <i>e.g. LandsD</i>  Secondary Users, <i>e.g. Other government departments, utilities</i>
<b>Availability</b>	Restrictions and constraints to the use of the GIS data; i.e. contains confidential data items.
<b>Symbology</b>	Set of Symbols used in GIS to identify items of data; <i>e.g. HK Government Engineering Survey Offices; 1:200 and 1:500 Survey and Drafting Specifications</i>
<b>Metadata</b>	Name of the metadata database
<b>Data Dictionary</b>	Name of Data Dictionary, <i>e.g. BMS and CIS Dictionaries</i>