Survey and Mapping Office (SMO)
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Technical Specifications for Ordering Seamless i-Series Digital Map

Introduction
The mode of ordering i-Series Digital Maps available to users is classified into two types, (1) order of discrete tile Digital Map and (2) order of seamless Digital Map. For discrete tile Digital Map, the deliverable is sheet-based according to the user-selected sheet number(s). For seamless Digital Map, the deliverable is one single file of Digital Map in seamless nature. This paper provides the list of Digital Maps available for seamless map order and the technical specifications for ordering seamless i-Series Digital Maps.

Type of Digital Maps supporting Seamless Map Order
In general, all the vector-based Digital Maps support seamless map order. For i-Series Digital Maps in text file, DGN v8 and DWG v2000 data formats, the seamless map order is supported with deliverable file size smaller than 300MB. The Digital Maps, with seamless map order available, are listed in the table below:-

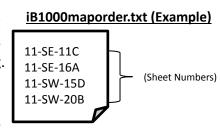| Type of Product	Product Name	Data Format				
		FGDB v9.3.1	GML v3.1.1	Text File	DGN v8	DWG v2000
Digital Topographic Map	iB1000	✓	✓		✓*	✓*
	iB5000	✓	✓		✓*	✓*
	iB10000	✓	✓		✓*	✓*
	iB20000	✓	✓		✓*	✓*
Digital Land Boundary Map	iC1000	✓	✓		✓*	✓*
Geo-reference Database	iG1000	✓	✓	✓	✓*	✓*

* Total file size of each seamless map should not exceed 300MB.

Approaches in ordering Seamless Digital Maps
Users may order seamless i-Series Digital Maps by providing either a list of sheet numbers or a user-defined extent for each product. The following specifications for each approach should be followed for processing the order by SMO:-

1. Submission of Sheet Number List in Text File Format
The submitted text file should include the product name and sheet numbers. The text file for seamless map order should be named as "**(ProductName)maporder.txt**" with its product name as prefix (e.g. iB1000maporder.txt). Each of the sheet numbers should be kept in different lines and to the left edge, as shown in the figure. Each submitted text file is considered as a single request for seamless map order. The deliverable of seamless i-Series Digital Map shall be in rectangular shape.

iB1000maporder.txt (Example)

11-SE-11C
11-SE-16A
11-SW-15D
11-SW-20B

(Sheet Numbers)

Last updated 2 October 2015

2. Submission of User-defined Extent in Text File Format, Shapefile, DGN or DWG Formats

Apart from the submission of sheet number list, the users can order seamless i-Series Digital Maps by submitting the user-defined extent in four different data formats. By using this approach, the users should use **standard frame** (e.g. 750m x 600m for iB1000 Digital Map) or **multiple of standard frame(s)** (e.g. 3000m x 600m for iB1000 Digital Map) for defining the required extent. The deliverable of seamless i-Series Digital Map shall be in rectangular shape. The details and specifications of the standard frame(s) and data formats are listed below:-

Size of Standard Frames for Seamless Digital Maps

Product Name	iB1000	iC1000	iB5000	iB10000	iB20000	iG1000
Size of Standard Frame (ground distance in meters)	750 x 600	750 x 600	3750 x 3000	7500 x 6000	15000 x 12000	7500 x 6000

Specifications for defining Standard Frames for Seamless Digital Maps

Data Format	Text File	Shapefile	DGN v8	DWG v2000
File Name	(ProductName)maporder .txt	(ProductName)maporder. zip^	(ProductName)maporder .dgn	(ProductName)maporder .dwg
File / Layer / Level Name		maporder	maporder	maporder
Geometry Type		Polygon	Shape	Closed Polyline
Grid System	HK1980 Grid	HK1980 Grid	HK1980 Grid	HK1980 Grid
Remarks	i) The Northing and Easting values of each vertex should be delimited by space. For the same group of vertices, each vertex should be delimited by space and placed in the same line of the text file. ii) The last Northing and Easting values of the vertex of the standard frame should be the same as its starting vertex indicating that the submitted standard frame is a closed geometry. iii) Only the vertices of the **outer boundary** of the user-defined extent should be inputted into the text file.	i) Only the vertices of the **outer boundary** of the user-defined extent should be inputted into the Shapefile.	i) Only the vertices of the **outer boundary** of the user-defined extent should be inputted into the DGN file.	i) Only the vertices of the **outer boundary** of the user-defined extent should be inputted into the DWG file.

^The mandatory files of shapefile, i.e. shape (.shp), shape index (.shx) and attribute (.dbf) formats, should be put in a zipped file.

Last updated 2 October 2015

The Digital Maps' users can refer to the following template and examples for realizing the specifications for the submission of user-defined extent.

Template and Example of .txt File

Template	Example
(ProductName)maporder.txt	iB5000maporder.txt
$E_1\ N_1\ E_2\ N_2\ E_3\ N_3\ E_4\ N_4\ E_1\ N_1$ — (1st User-defined Extent)	834038 816465 837788 816465 837788 813465 834038 813465 834038 816465

Reference User-defined Extent using standard frames

Example	1	2
Coverage of User Extents	4 Nos. of iB1000 standard frames	4 Nos. of iG1000 standard frames
Images (Ground Distance in meters)	(4 x 750 m) 3000 m; 600 m	(2 x 7500 m) 15000 m; (2 x 6000 m) 12000 m

Enquiries on the Purchase of Digital Maps

For any enquiry on the purchase of Digital Maps, please contact us through the following channels:-

Address: *Map Publications Centre, Hong Kong*
Survey and Mapping Office, Lands Department, 23/F North Point Government Offices
333 Java Road, North Point, Hong Kong
Telephone: *(852) 2231 3187*
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