

# DIGITAL DATA STANDARDS FOR VRI MAP FILE PRODUCTION

## Version 1.0

Following the standard British Columbia Geographic System (BCGS) 6' x 12', 1:20,000 format, and as defined in the Specifications and Standards sections of this document, and in Universal Transverse Mercator (UTM) projection, the contractor will provide files as per the contract document delivery schedule. The completed digital graphic files will be submitted in Ministry Digital Standard (Intergraph Design File (IGDS) Format, Version 8.0 or later), for the contracted map sheets, paired with attribute files in Microsoft Access 97 (.MDB) format.

Digital graphic files will be vector and polygon cleaned and polygon numbered in Intergraph (IGDS) format in 2D. All digital files will undergo adequate final quality control procedures before delivery. All digitizing will be completed to Integrated Land Management Bureau TRIM Digitizing Specifications. Accuracies will conform to controlled mapping standards (1mm at map scale or better. E.G. TRIM II).

Attribute files will conform to VegCap Ver 2.50 standards and will run through this software error free (warnings permitted).

Vegetation Resources Inventory utilizes what is referred to as a "continuous polygonal coverage". The vegetation coverage has line work and centroids that completely cover the map area, without any overlapping polygons or holes (NOTE that the minimum polygon area size defined here is not intended to replace the standards defined for data collection). The following specifications apply:

- one centroid per polygon
- minimum digitized polygon area                      0.5 hectare
- minimum resultant polygon area                      0.1 hectare

The graphics files will consist of level 9 vegetation cover polygons, level 10 polygon centroids, and level 56 neatlines, all meeting Forest Analysis and Inventory Branch's specifications. Where applicable, the files will be edge tied, both spatially and attributes. Double line water features that form all or part of vegetation cover polygons will be copied from the official TRIM base to level 9 in their true positions. This linework is to meet the same specifications as the rest of the vegetation cover typing and no longer needs to be in its own unique symbology. Also, no unique line symbology is to be used to indicate vegetation cover disturbances or data capture accuracy.

### Spatial File Specifications

- Level 9 polygons: element type = 4 (line string), line code = 1 (dotted), weight = 0, colour = 61, and class = 0 (primary).
- Level 10 centroids: element type = 17 (text node), line code = 0 (solid), weight = 0, colour = 71, class = 0 (primary), font = 25, justification = 7 (centre, centre), text size = 40000 (:40), and range = 1 – 9999.
- Level 56 neatlines: element type = 4 (line string), line code = 0 (solid), weight = 0, colour = 0, and class = 2 (construction).

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**Cleaned vector files will adhere to the following standards:**

- XY slivers less than 30 degrees not allowed
- short isolated segments less than 1 m not allowed
- duplicate segments not allowed
- duplicate points not allowed
- dissimilar features at joins only permitted at neatlines
- multi-nodes greater than 4-way nodes not allowed

**Design files will be void of the following:**

- Complex or connected line strings
- IGDS elements type 6, type 12, or type 14 which can be defined as two or more like lines or line strings connected by a complex header
- Type 12 elements, which are created under the create complex chain command or during input stage when placing linear type elements, which have more than 101 points.

Production data files will meet published standards and submissions will be rejected if they do not meet the above standards.

## GLOSSARY

**Terms as defined by Resources Analysis and Inventory Branch, Ministry of Forests and Range:**

**Centroid:**

A polygon's unique primary text node with a graphic group of zero. Only one centroid per polygon permitted.

**Construction line:**

A line with a class = 2 which can be turned on or off graphically, and which is generally not displayed when creating hardcopy plots.

**Dissimilar features at join:**

Dissimilar features occur when line strings of different data types (represented by line codes or MS Link numbers) join at a node. Resources Inventory has placed restrictions which limit this to where polygon typelines meet the level 56 neatlines

.

**Duplicate elements and segments:**

Elements duplicated and located on the same level that contain the same X,Y vertices, composition, and element / class types.

**Duplicate points:**

Two vertices which share the same X and Y coordinates that are a part of the same continuous line string.

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## **Hanging end points (overshoots / undershoots):**

If any other linear elements fall within a search radius defined in metres, the endpoint will be flagged. Branch has set radius to 20 000m for zero tolerance of hanging endpoints.

## **Improper nodes:**

An element endpoint which intersects itself. Generally defined as a vertex on top of another vertex. Remove one vertex to correct.

**Multi-way node:** The endpoints of several elements meet at the same X and Y location. Multi-way nodes greater than four are not accepted.

## **Polygon:**

A plane figure containing a single centroid or primary text node, bounded by lines to form an enclosed area.

## **Primary text node:**

An IGDS class zero text node with a graphic group of zero used for analytical and cartographic purposes.

## **Short isolated segments:**

Linear elements in the design file which are equal to or shorter than one meter are not allowed. This applies to elements whether or not they share endpoints with any other elements; i.e., this applies to completely isolated elements, hanging endpoints as well as segments in a line string which share both endpoints.

## **Vector Clean:**

Elements on a defined level are joined (noded) at exactly the same and appropriate location with precisely identical X and Y coordinates.

## **XY spikes:**

Current checking software is searching overlay elements for a maximum distance of 1000m between two consecutive vertices as a possible problem to be checked.

## **XY sliver:**

Defines the angle in degrees formed at the middle vertex of any three consecutive vertices along a linestring. Checking software is currently set to 30 degrees or less.