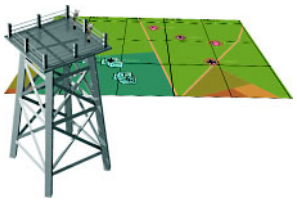

MÄK Plan View Display 2.3-ngc Release Notes

This release note provides the following release-specific information for MÄK Plan View Display 2.3-ngc:

Document ID: PVD-2.3-2-030304

Supported Systems and System Requirements

Plan View Display 2.3 is being released for:

- PCs with Windows 2000/XP/NT 4.0
- Linux
- SGI IRIX.

If you are using the Plan View Display API, application code must be built with the indicated compilers in order to link to Plan View Display libraries.

Table 1: Platforms supported

Platform	Compiler
SGI IRIX6.5	MipsPro7.3 C++ compiler (available from SGI)
Linux 7.2	GNU C++ (GCC) 3.0.2
PC with Windows NT 4.0 SP6 /Windows 2000 SP2/XP	Microsoft Visual C++ 6.0, Service Pack 5

MÄK Product Compatibility

To use the Plan View Display API, you must link with VR-Link 3.8-ngc. If you are building for HLA and want to link with the MÄK RTI, use MÄK RTI 2.0-ngc.

MÄK Plan View Display 2.3 is a parallel release to MÄK VR-Forces 3.2-ngc. It is not compatible with previous versions of the Plan View Display.

Qt Release Compatibility

If you want to do development using the Plan View Display API, you need to use Qt, a cross-platform GUI toolkit. The Plan View Display GUI was built with Qt release 3.0.5. A Plan View Display developer's license includes a Qt development license. MÄK provides you with a Qt license key. However, you must download the correct version of Qt from www.trolltech.com.

System Requirements for PCs

To install the Plan View Display on a PC, you must have a system with the following minimum requirements:

- Processor: Intel Pentium 400 MHz or equivalent.
- RAM: The minimum required for your operating system, plus:
  - 32 MB for DIS exercises
  - 64 MB for HLA federates

Depending on the size of your terrain databases, you may need more RAM.

- Hard disk space - Approximately 185 MB. Most of this is for the terrain databases shipped with the Plan View Display and the class reference documentation. You may need considerably more space depending on the databases you plan to use.
- Two or more multiples of the amount of RAM for virtual memory. Running the Plan View Display in HLA may require increased amounts of virtual memory.

Online Help

The online help is in HTML format and uses the default browser for your computer. For all online help features to work, you must enable Javascript in your browser.

Network Compatibility

HLA only

Plan View Display 2.3 was built against VR-Link 3.8-ngc and is compliant with:

- RPR-FOM 1.0 and a subset of 2.0 (draft 6 and 14)
- MÄK RTI 2.0-ngc
- DMSO RTI NG 4 and 6.

Plan View Display 2.3 is compatible with applications that use earlier versions of VR-Link if they support versions of the RPR FOM listed above.

DIS only

Plan View Display 2.3 supports DIS 2.0.4, IEEE 1278.1, 2.1.4, and IEEE 1278.1a, and can therefore interoperate with DIS applications of any of these versions.

RTI Support

The MÄK RTI is included on all MÄK product CDs. It is link-compatible with the DMSO RTI NG. Plan View Display 2.3 has been tested with DMSO RTI NG 4.0 and 6.0.

If you use the MÄK RTI, be sure that the Plan View Display can find your FED file, and optional *rid.mtl* file, by putting them in the directory from which you are running, or by setting the environment variable RTI_CONFIG to the directory that contains them.

FOM Support

Plan View Display 2.3 has built-in support for versions 0.5, 0.7, 0.8, 1.0, and 2.0 of the RPR FOM. It also supports VR-Link's ability to support alternative FOMs through the FOM Mapper. By default, Plan View Display 2.3 uses RPR FOM 1.0.

The keywords for specifying different versions of the RPR FOM are:

- RPR FOM 0.5: `vlRPR05`
- RPR FOM 0.7: `vlRPR07`
- RPR FOM 0.8: `vlRPR08`
- RPR FOM 1.0: `vlRPR10`
- RPR FOM 2.0 darft 6: `vlRPR20006`
- RPR FOM 2.0 draft 14: `vlRPR20014`.

For information about FOM mapping and selecting the correct FOM mapper, see Startup Options for HLA Federations in Chapter 3, "Getting Started", in *MÄK Plan View Display User's Guide*.

New Features and Updates

This release of MÄK Plan View Display has the following updates and new features:

- *MÄK Plan View Display User's Guide* includes documentation of the GUI API
- Support for tuning GUI performance
- Ability to view GUI performance in a Frame Rate Monitor
- Improved and expanded terrain database support, as follows:
  - Support for importing ESRI shape files
  - Support for multiresolution bitmap paper maps
  - Support for selecting feature data to display
  - New map file parameters
  - The Paper Map Layers dialog box has been renamed and revised
- Icons in the Echelon View show entity state (healthy or destroyed)
- Support for asynchronous I/O in DIS.

GUI API Documentation

The Plan View Display GUI API is now fully documented in *MÄK Plan View Display User's Guide*.

Changes to the Plan View Display API

The Plan View Display API has changed as follows:

- myTMMapArea no longer exists as a member variable of the *DtTMWindow* class. It must be replaced with a function call to areaMap(). Any code that references this member variable will no longer compile
- The *DtTMWindow* class has been changed to be a subclass of *DtBaseWindow*, so, any creator functions that look like this:

  ```
  static DtTMWindow * create(QWidget* parent, const char* name, WFlags
    flags);
  ```

  must be changed to look like this:

  ```
  static DtBaseWindow * create(QWidget* parent, const char* name, WFlags
    flags);
  ```

  to have the code compile properly.

- The initMapArea of the DtPvdWindow class has changed its prototype from:

  ```
  virtual bool initMapArea(const DtTMFactory* f);
  ```

  to:

  ```
  virtual bool initMapArea(DtTMMapArea* area, const DtTMFactory* f);
  ```

  This accounts for the fact that a window can now support multiple map areas.

- The initMiniMap of the *DtPvdWindow* class has changed its prototype from:

```
virtual bool initMiniMap(const DtTMFactory* f);
```

to:

```
virtual bool initMiniMap(const DtTMFactory* f, QWidget* parent = 0);
```

GUI Performance Tuning and the Frame Rate Monitor

Plan View Display 2.3 provides feedback about the performance of the GUI display and allows you to set performance parameters.

The Frame Rate Monitor. provides feedback about the Plan View Display performance. Performance is characterized as being at one of the following levels:

- Meeting frame rate targets
- Not meeting frame rate targets
- Heavy traffic.

See Chapter 6, "Optimizing Performance" in the PDF version of *MÄK Plan View Display User's Guide* for complete documentation.

See Table 2-3 in *MÄK Plan View Display User's Guide* for descriptions of the following new MTL parameters that support performance tuning:

- PVD_consecutiveTimesOverThreshold
- PVD_networkTimeThreshold
- PVD_networkFrameRateBuffer
- PVD_slowNetworkFrameOverride
- PVD_tickManagingEnabled

Improved and Expanded Terrain Database Support

This section describes various improvements and updates to the Plan View Display's support for terrain databases.

Specifying the Display of Feature Data

If a terrain database supports feature data, you can specify which data to display. See section 4.3.2 "Specifying the Drawing Mode", in *MÄK Plan View Display User's Guide* for more information.

Support for Shapefiles

Plan View Display 2.3 adds support for shapefiles. For details, see section 7.4, "Shapefiles", in *MÄK Plan View Display User's Guide*. This release includes an example map file that loads shapefiles – *antigua.map*.

Changes to the Paper Map Layers Dialog Box

The Paper Map Layers dialog box has been renamed the Raster Map Layers dialog box. The dialog box now supports changing the draw order of the paper maps. Maps listed at the top of the box are drawn on top of (after) maps listed below them. Select a map name in the box, and use the "Raise" and "Lower" buttons to move them up and down the list. Changes in this dialog box do not take effect until you press Apply or OK.

Multi-Resolution Bitmaps

The Multi-Resolution Paper Map is a new type of paper map that you can specify in a *.map* file. Multi-resolution paper maps let you:

- Divide image files into segments and load only the image file segments that currently need to be displayed on the screen at a particular time. This feature lets you use large, high-resolution images without using up large amounts of memory.
- Specify use of different images at different screen zoom resolutions. For example, you can use lower resolution images for zoomed-out views, and higher resolution images for zoomed-in views.

Instead of specifying an image file in the paper map entry, you specify an MTL file that contains image information. You can generate the MTL file with the ImageSplitter tool or create it by hand.

See section 7.3.5, “Paper Map Records”, in *MÄK Plan View Display User’s Guide* for details about multiresolution bitmap file format. See section 7.5, “Multiresolution Bitmaps” for an explanation of how to use the Image Splitter tool and multiresolution bitmap resolution levels. The example *berkeley.map* demonstrates multi-resolution bitmaps.

MAP File Changes

Map files support the following new parameters:

- **Name** - Specifies a string name for the paper map. This name is used in the Raster Map Layers dialog box. If you do not specify a name, the filename is used in the dialog box.
- **Alpha** - Specifies the alpha mode to be used when drawing a paper map. The values are Blend and Mask. Blend causes the papermap to be drawn using full alpha blending. Mask causes the papermap to be drawn using a simple 1-bit alpha mask, that is, fully transparent, or fully opaque. Mask mode does not look as good as blend, but it is much faster. The default value is Mask. Multi-resolution paper maps do not support blending. These options are only useful if the papermap file has alpha data saved with it.

Support for c7b Databases

You can load CTDB version 7 terrain databases (.c7b), with the following restrictions:

- We can import gridded and TIN data.
- We provide limited support for MES data, representing it as feature data in the PVD. We do not import the geometric model data associated with MES. For example, the PVD represents a house imported from MES data as a point feature (it will not import the polygon data representing the structure itself).

Miscellaneous Updates and Changes

- Entity icons in the Echelon View now show if the entity is destroyed with the standard destroyed icon.
- When you make changes to the drawing mode on the Terrain View Options dialog box, Drawing Mode tab, you can choose to apply the changes to the Minimap. To apply changes to the Minimap, check the Apply Drawing Mode Changes to Minimap check box.
- The Plan View Display supports asynchronous I/O in DIS. To enable asynchronous I/O, start the Plan View Display with the `-I` option.

Documentation Updates

MÄK Plan View Display User's Guide has been updated for this release.

Bug Fixes

This release fixes the following problems:

- Using **minMaxLatitude** and **minMaxLongitude** in DTED *.map* files works correctly.
- CADRG papermap files display correctly.

Known Problems

Plan View Display Release 2.3 has the following known problems:

- On IRIX, icons may appear discolored or grainy unless color depth is set to 24-bit.
- True Type fonts are not supported in SGI IRIX. Use bitmaps for entity icons.
- If you are using Plan View Display in a large DIS exercise with heavy network traffic, you may experience problems with dropped packets and entities may time out. In HLA, you can avoid dropped packets by configuring the MÄK RTI to use asynchronous I/O. In DIS, you can use asynchronous I/O by starting with the `-I` parameter.

- Uninstalling the Plan View Display in Windows via InstallShield uninstalls the entity fonts. If you have another application that uses these fonts, such as the MÄK VR-Forces, the correct entity icons would not be displayed. You must manually install the fonts from their location in the other application that needs them.
- The Qt translation files (in *./translations*) for built-in Qt-level GUI items do not work properly. The translation files for Plan View Display work correctly.
- If you are using TrueType fonts, the symbols for air aggregates are incorrect.
- Subsurface entities use incorrect icons.
- Changing the measurement unit does not change the measurement unit for contour lines.
- True Type fonts are not supported in SGI IRIX. Use bitmaps for entity icons.
- A DtedMetafileRecord that does not have a valid File entry hangs the Plan View Display.