OpenROAD has always provided features that enable rapid application development and deployment. OpenROAD version 5.1 takes this further, providing robust support for using XML in your OpenROAD applications. Now OpenROAD Workbench can import and export applications and components using XML.

Using this technology, you can exploit the integration, storage, and transport of data. For example, since an OpenROAD application is simply data, by using the XML feature you can develop utilities to analyze OpenROAD applications. Moreover, with the new XML system classes, within OpenROAD you can search, modify and create XML documents simply and directly.

**New Features**

**XML Support**

New system classes provide a rich set of attributes and methods that will enable you to easily manipulate XML documents of any size. You can now modify OpenROAD systems to integrate with other systems in your enterprise, reusing proven business logic to provide more value to your business. You can now import and export OpenROAD applications and components to and from XML documents using the new XML format of OpenROAD Workbench.

This capability enables you to store and extract applications using source management systems to show changes to source code in a more readable format than the traditional export format provides. XML support is also critical to the smooth migration of OpenROAD applications and components to Unicode environments (multi-byte or UTF-8), which is available in OpenROAD 6.0. For initial information about enabling OpenROAD applications to handle Unicode in the OpenROAD 6.0 (Windows only) release, consult our blog and the Migration Guide provided with OpenROAD 6.0.

**HashTable System Classes**

OpenROAD’s HashTable support enables rapid storage and instant retrieval of items through the addition of three new system classes: HashTable, IntegerHashTable, and String-HashTable. These classes are simple to use and clean up after themselves when the application closes. HashTables can store objects using either integer or character lookup key types. Using the HashTable methods boosts lookup performance compared to Array.Find() or ChoiceList methods.
FormField System Class Attribute
A new FormField attribute, BgDisplayPolicy, enables background bitmaps to be drawn from the top left corner of whatever field they are in. This functionality is fundamental to enhancements coming in a future release.

StringObject System Class Methods
The StringObject system class now has Split and Join methods. The Split method splits the contents of a string object wherever one of the specified delimiters appears, and has a rich set of options to accommodate the wide range of text manipulations that developers need to handle. The Join method joins the contents of an array of string objects, interpolating a delimiter of any length between them.

ArrayObject System Class Method
The ArrayObject system class Find method can now search on all subclass attributes that an array may contain, not just those belonging to the declared class. This considerably increases the range and power of Find in heterogeneous array sets.

Array System Class Attribute
The Array system class’s row_class attribute enables the data type of any array to be identified at runtime.

OpenROAD Workbench Improvements

Resizeable Workbench
The OpenROAD Workbench IDE, initially introduced in OpenROAD 5.0, can now be resized.

Easier Way to Create Composite Fields
You can create composite fields directly from the Workbench Frame Editor’s floating menu bar by clicking Insert, Field, CompositeField.

New Way to Invoke Application or Component Importing
OpenROAD applications and components now can be imported by simply right-clicking in the OpenROAD Workbench “Applications” portlet to invoke a context-sensitive menu, giving you quick access to the import feature.

Community Contributions
OpenROAD 5.1 includes enhancements generated in participation with the OpenROAD community through design reviews and Code Sprints held throughout the world. The following list includes highlights from these events:

- FrameExec System Class
- FrameSource System Class
- RadioField System Class
- SessionObject System Class
- ProcExec System Class