Spectra CX Product Line Management

This optional feature for the standard Spectra CX product supports modeling of a radio family within Spectra CX. This feature provides architects with the ability to identify variation points in the product line based on a single "base" model. Variation points allow product engineers to specify product configurations, which are used to generate standard Spectra CX models for each product variant.

Modeling Product Lines

Spectra CX supports modeling of Software Communications Architecture (SCA) applications (waveforms) and platforms (nodes or assemblies of nodes), and verification of compliance with the SCA specification. From a CX model the user is able to generate the full SCA domain profile, the set of XML descriptors, for the applications and nodes.

Radio manufacturers need to produce variants of their SCA applications and platforms to support different configurations of the radio set. Developers also need to manage development, test, and production versions of their radio components. Currently radio architects and developers use the Spectra CX model management capabilities to produce and manage complete models for each variant.

The Product Line Management feature adds new modeling elements, Variation Points, to Spectra CX. Product line architects can use variation points to identify the product variations for the components instances, ports, and properties of their application or platform. This enables them to use a single model for the entire product line.

Product Line Model

Architects use the Spectra CX domain-specific modeling capabilities to produce a model for the product line. This base model specifies all the elements and variation points.

Variation Points

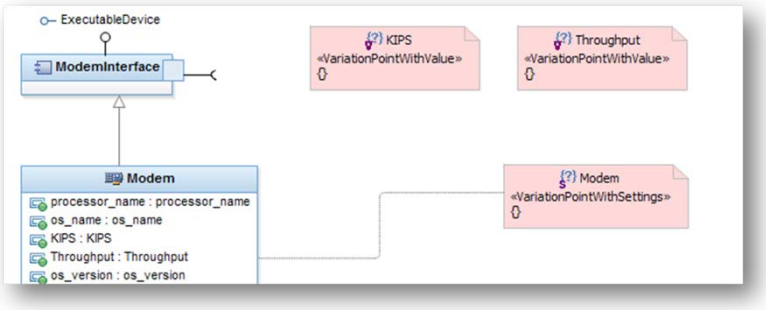
Identify one or more locations in the product line model where a variation may occur. Variation points come in multiple forms providing the ability to identify optional elements, parameterize the values of attributes, parameterize the settings of an element, and other element-specific options.

Variation points can be created on applications and platforms; components and devices; properties; implementations; and ports.

A single variation point may be used to constrain multiple model elements of the same type. This allows an architect to simplify the model by logically grouping variation points.

Variation Point Model

Generated from the product line model it enumerates all of the variation points making it easier to specify product configurations.



Product Configuration Editor

Using the generated variation point model a product engineer can create specific configurations of the base model where they include / exclude optional elements and provide values and settings for the parameterized variation points.

Product Configuration Models

Once a product configuration has been engineered and validated, users can generate a new Spectra CX model that takes into account the specified configuration values. From this model artifact, the user will be able to generate the SCA domain profile and other Spectra CX generated SCA artifacts (C/C++ code, unit tests), and deploy and test their application configuration on the platform variant.

Complementary SDR Products

Spectra CX Product Line Management is part of the most complete family of Software Defined Radio (SDR) products and technologies designed to support all of your SCA SDR development needs.

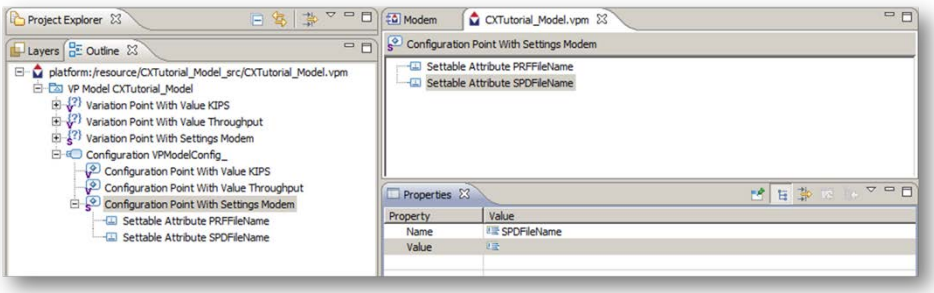
Expect Professional Services

ADLINK offers a complete suite of training courses on the SCA and SDR technologies and their implementation using ADLINK's Spectra SDR products. We also offer professional services conducted by leading industry experts in all skill areas required for SCA radio development. Services include workshops to help SDR engineers develop both SCA platforms and waveforms, as well as longer-term consulting services with ADLINK.

SDR specialists participating throughout the development lifecycle, including the actual implementation of your SDR solution. Finally, ADLINK is renowned for the quality and responsiveness of our Support and Maintenance Services that are available on a worldwide 24x7 basis where required.

Summary of Spectra CX Product Line Management Benefits

- Radio developers no longer need to create and maintain a model for every possible product variant, only the base model, variation points and product configurations
- Architects have the flexibility of tailoring the core assets to the needs of the product line
- Modeling the variation points lets the product line architect define the range and scope of the product variants
- Variation Points communicate to the user the knowledge needed to specify a variant
- Variation Point Models show which variant points exist and how to create a product variant
- Users can engineer product configurations to meet their specific needs
- Generated product configuration models are complete, correct-by-construction, Spectra CX models



For More Information

For further information regarding Spectra CX Product Line Management, or any of ADLINK's SDR products and services, please e-mail: ist_info@adlinktech.com or visit: ist.adlinktech.com

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