riverbed

Riverbed Modeler: Add-on Modules

Riverbed® Modeler provides a comprehensive development environment to model and analyze communication networks and distributed systems. These optional modules are available to add-on to the Modeler.

Riverbed Modeler Software Modules

Add-on Modules	Description
3D Network Visualizer*	Visualize your network in 3D, including 3D models of the devices. This module includes an API to add custom visualizations. **Use Cases:** 1. Conduct a live demo showing object positions and status. 2. Use as a visual front-end for a force-on-force simulator.
eXpress Data Import*	Import network topology, traffic flows and link loads from device configurations and various 3rd party software.
High-Level Architecture (Co-simulation)*	The High-Level Architecture functionality in Riverbed Modeler enables you to include a simulation as one of the federates in an HLA federation, and thus allowing to both affect—and be affected by—events in other federates.
Server Characterization Environment*	Analyze and edit data about server resources and processes. Import server data into Server Characterization Editor to analyze the data and organize it into workloads (called jobs). Export the results into a server model to simulate the operation of the server in a network environment.
System-in-the-Loop	Provides real packet capture, translation, and transmission. This module also allows models to communicate with live equipment. **Use Cases:** 1. Connect a simulated OSPF network to a real router and study the performance of the end-to-end system. 2. Run real applications over an in-development network to see how the real applications will perform.

Add-on Modules	Description
Terrain Modeling	This module provides support for several terrain types and pathloss models. More terrain formats and pathloss models can be added through an open API. **Use Cases:** 1. Study the communications performance of mobile units moving through hilly terrain. 2. Optimize the use of line-of-sight and beyond-line-of-sight technologies in different terrain.
TIREM Propagation Model*	TIREM functionality includes the TIREM3 and TIREM4 models. 1. TIREM3 is the standard propagation model for the United States Department of Defense. 2. TIREM4 is an optimized version of TIREM3 that provides faster computation of path loss values, especially for detailed terrain profiles.
Urban Propagation*	Use 3D models of buildings and material properties to accurately determine pathloss in urban, indoor, and indoor/outdoor environments. This functionality requires the terrain modeling module. **Use Cases:** 1. Test the performance of an 802.11 network in a large conference center. 2. Determine optimal frequency bands for a first-responder network in a given city.
Wireless	Simulate detailed transmission models, including pathloss, antenna gain, SNR/BER mapping, and error correction. Also, includes the advanced wireless package, which can import multipath, MIMO, and other data from MATLAB. **Use Cases:** 1. Develop a new wireless protocol for a mesh sensor network. 2. Study the effect of jamming on a wireless network.
IPv6	Create detailed and high-fidelity model of IPv6. **Use Cases:** 1. Study a hybrid IPv4/IPv6 network. 2. Study OSPFv3 routing in a MANET IPv6 network. 3. Develop modifications to IPv6.
MPLS	Create a detailed and high-fidelity model of MPLS. **Use Cases:** 1. Study the effect of introducing MPLS into an existing ATM network. 2. Study the effect of developing a new IP network and adding MPLS to it.

Add-on Modules	Description
LTE	Simulate a detailed and high-fidelity model of LTE. Includes, up to version 8 of the LTE specifications. **Use Cases:** 1. Determine optimal LTE settings for a given network. 2. Modify the LTE protocol to add new features for power saving or increased bandwidth. 3. Study tactical military networks incorporating LTE.
WiMAX	Create a detailed and high-fidelity model of the WiMAX protocol. **Use Cases:** 1. Study a hybrid 802.11/ 802.16 network. 2. Develop modifications to the WiMAX protocol for use in smart grid deployments.
UMTS	Create a detailed model of UMTS to study a hybrid LTE/UMTS network. This module requires the LTE modeling add-on.

*Note: These modules are not offered as part of Modeler University program. They are only offered for full featured standard Modeler.