

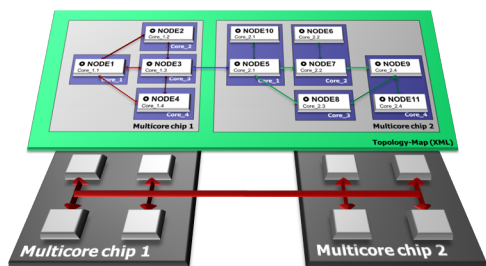


# Poly-Mapper™ Multicore Topology Mapping Tool

**Poly-Mapper™** is a GUI based, simple, flexible tool for rapid creation of validated multicore communications topologies.

## Topology Map

The topology's nodes and links are laid out on a canvas. The properties and resources of the nodes, links and other topology components are easily defined. Poly-Mapper builds and validates the topology and generates an XMLbased Topology-Map. The Topology-Map contains the structure and the properties of the topology. The topology in a closely distributed target system is static and the Topology-Map is also statically configured, allowing for validation and optimization.



Topology, User Defined

```
ppc_dsp_2.pmap
<?xml version="1.0" ?>
<PROJECT name="Telecom_1">
  <INCLUDEDISPATCHER path="ppdisp.pdpf" />
  <INCLUDELINKDRIVER path="simmlink.plpf" />
  <INCLUDELINKDRIVER path="tcpplink.plpf" />

  <PRIORITYLEVEL name="HIGH" />
  <PRIORITYLEVEL name="LOW" />

  <DATABUFFERSIZE size="256" />

  <SUBNET name="NET1" dispatcher="PPDispatcher" />
  <SUBNET name="NET2" dispatcher="PPDispatcher" />
  <SUBNET name="NET3" dispatcher="PPDispatcher" />
  <SUBNET name="NET4" dispatcher="PPDispatcher" />
  <SUBNET name="NET5" dispatcher="PPDispatcher" />
  <SUBNET name="NET6" dispatcher="PPDispatcher" />
  <SUBNET name="NET7" dispatcher="PPDispatcher" />
  <SUBNET name="NET8" dispatcher="PPDispatcher" />

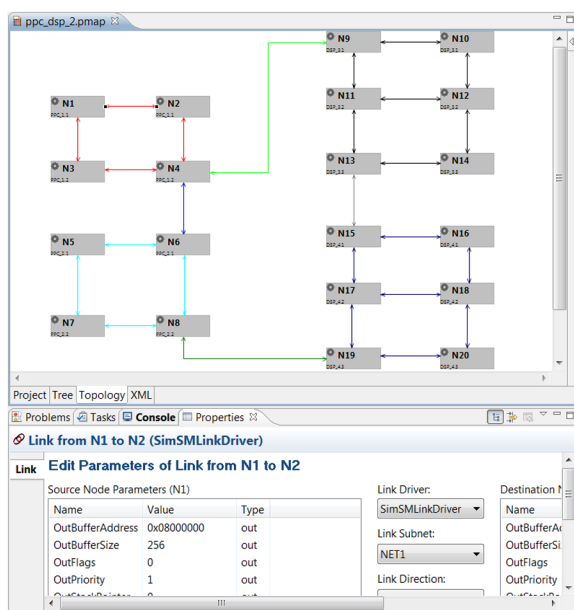
  <CPU name="PPC440" translator="Le8Bit" />
  <CPU name="C64xx" translator="Le8Bit" />

  <!-- PPC_1.1 -->
  <NODE name="N1" os="ThreadX" cpu="PPC440">
    <MESSAGEBUFFERS prioritylevel="HIGH" depth="1" />
  </NODE>
  <!-- ... (other nodes) ... -->
</PROJECT>
```

Topology-Map XML

## Simplification

New topologies are easily created with the guidance of wizards, drop down menus and default values. The topology canvas provides drag/drop access to change the topology, making quick work of modifications and reconfiguration. Nodes or links are selected on the canvas and their properties accessed in the properties view.



## Performance and Resources

Through its Eclipse based graphical and textual interface, Poly-Mapper enables rapid reconfiguration of the topology layout and resources allocated for communication. This allows the user to try different mappings and configurations in a short period of time. The user can therefore easily balance performance with target system resource constraints.

## Accuracy and Scalability

The Topology-Map is model based and therefore scales rapidly and accurately. The validation reduces the number of errors in the topology code and consequently debugging time.



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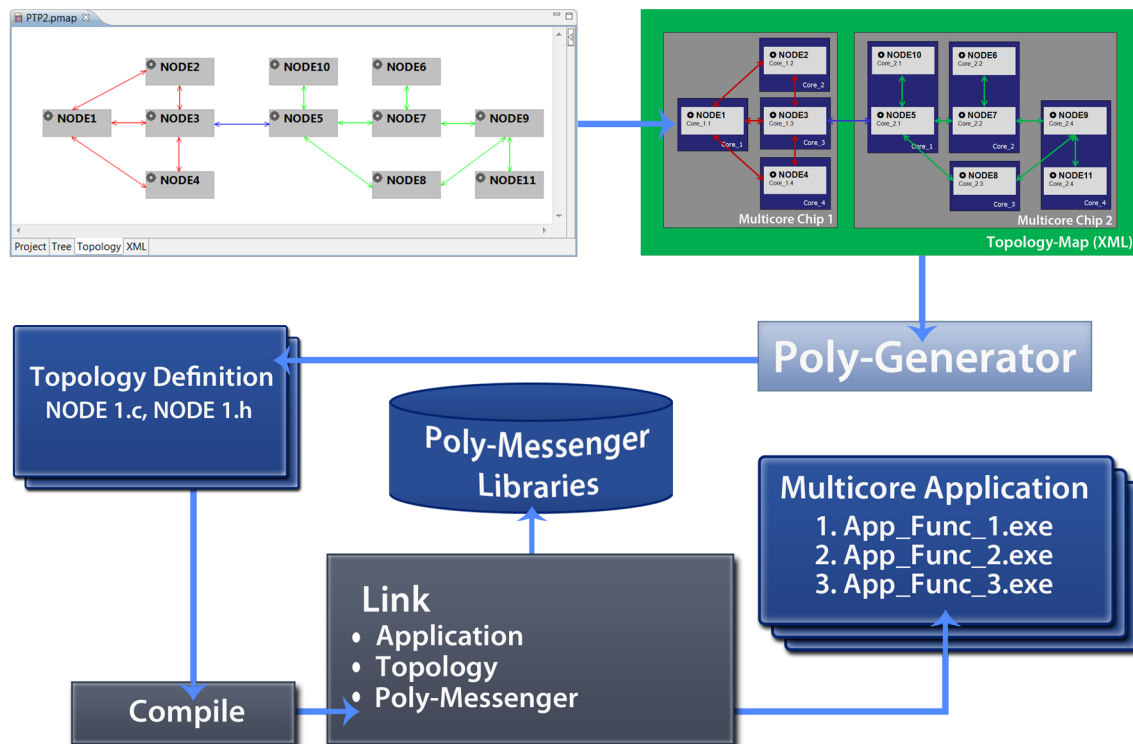
Poly-Mapper™ is a GUI based, simple, flexible tool for rapid creation of validated multicore communications topologies.

## Virtual Multicore Development

The topology's nodes and links are laid out on a canvas. The properties and resources of the nodes, links and other topology components are easily defined. Poly-Mapper builds and validates the topology and generates an XMLbased Topology-Map. The Topology-Map contains the structure and the properties of the topology. The topology in a closely distributed target system is static and the Topology-Map is also statically configured, allowing for validation and optimization.

## Application and Topology Separation

The Poly-Mapper, Poly-Generator and Poly-Messenger/MCAPI combination provides separation between the multicore application and the communications topology. MCAPI-ready functional modules are easily re-mapped to different cores, at configuration time, and the topology resources and configuration are modified and optimized, without modification of the application source code. This allows the application developer to quickly and accurately evaluate different mappings and configuration to balance performance and resource allocation.



## About PolyCore Software, Inc.

PolyCore Software, Inc., provides run-time solutions and tools for multicore platforms simplifying application migration to multicore, while preserving existing software investments thus improving time to market while reducing development costs and risk.

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