

DSP in GPP Applications

Panel Discussion

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RapidFET – Network Management and Diagnostic Tool

The screenshot displays the RapidFET software interface. At the top, the title bar reads "RapidFET - 568 and 8548". Below the title bar is a menu bar with "File", "Edit", "View", "Target", "Network", "Settings", and "Help". A toolbar contains various icons for network management. The main area shows a network map with nodes connected by lines. Nodes include FreeScale MPC8548 and Tundra Tsi568. A context menu is open over Node 5, listing options like "Display PE Info...", "Registers", "Edit Flash Memory", "Routing Table", "Open Reference Manual...", "Connect", "Disconnect", "Discovery...", "Reset Trigger", and "Data Generator...". The "Registers" option is expanded, showing a list of registers such as "Architectural Register", "1x/4x LP-Serial Register", "Error Reporting Register", "Implementation Register", "Revision Control Register", "ATMU Registers", "Outbound Message Unit Registers", "Inbound Message Unit Registers", "Doorbell Registers", and "Port-Write Registers".

In the bottom-left corner, there is a "Traffic Efficiency - Node 3, Port 1" window. It contains three graphs: "Packet Rate (Kipackets / second)", "Average Packet Size (bytes)", and "Utilization (% total bandwidth)". Each graph shows a line plot over time. To the right of the graphs, there are input fields for "Maximum" (2000), "Last Reading" (1029.315), "Show Packet Efficiency" (checked), and "Last Reading" (256.0). Below the graphs, there is another "Last Reading" field showing 52.4.

In the bottom-right corner, there is a "Rapid Architectural Register" window. It shows a table of registers. The "Register Name" is "Switch Port Information CAR" and the "Register Offset" is "0x10 (Word 1)". The table has 8 columns (0-7) and 4 rows of data.

Register Name	Register Offset: 0x10 (Word 1)								
Register Name	Register Offset: 0x18 (Word 0)								
Bits	0	1	2	3	4	5	6	7	
00:07	Read 0	Instruction Read 0	Read for Ownership 0	Data Cache Invalidate 0	Cacheout 0	Data Cache Flush 1	VD Read 1	Instruction Cache Invalidate 0	
00:1e	TLB Invalidate Entry 0	TLB Invalidate Entry Sign 0	Reserved 0						
10:23	RRead 1	WWrite 1	Streaming Write 1	Write With Response 1	Data Message 1	Doorbell 1	Reserved 0	Atomic Test and Swap 0	
24:21	Atomic Increment 1	Atomic Decrement 1	Atomic Set 1	Atomic Clear 1	Reserved 0	Port Write 0	Implementation Defined 0		

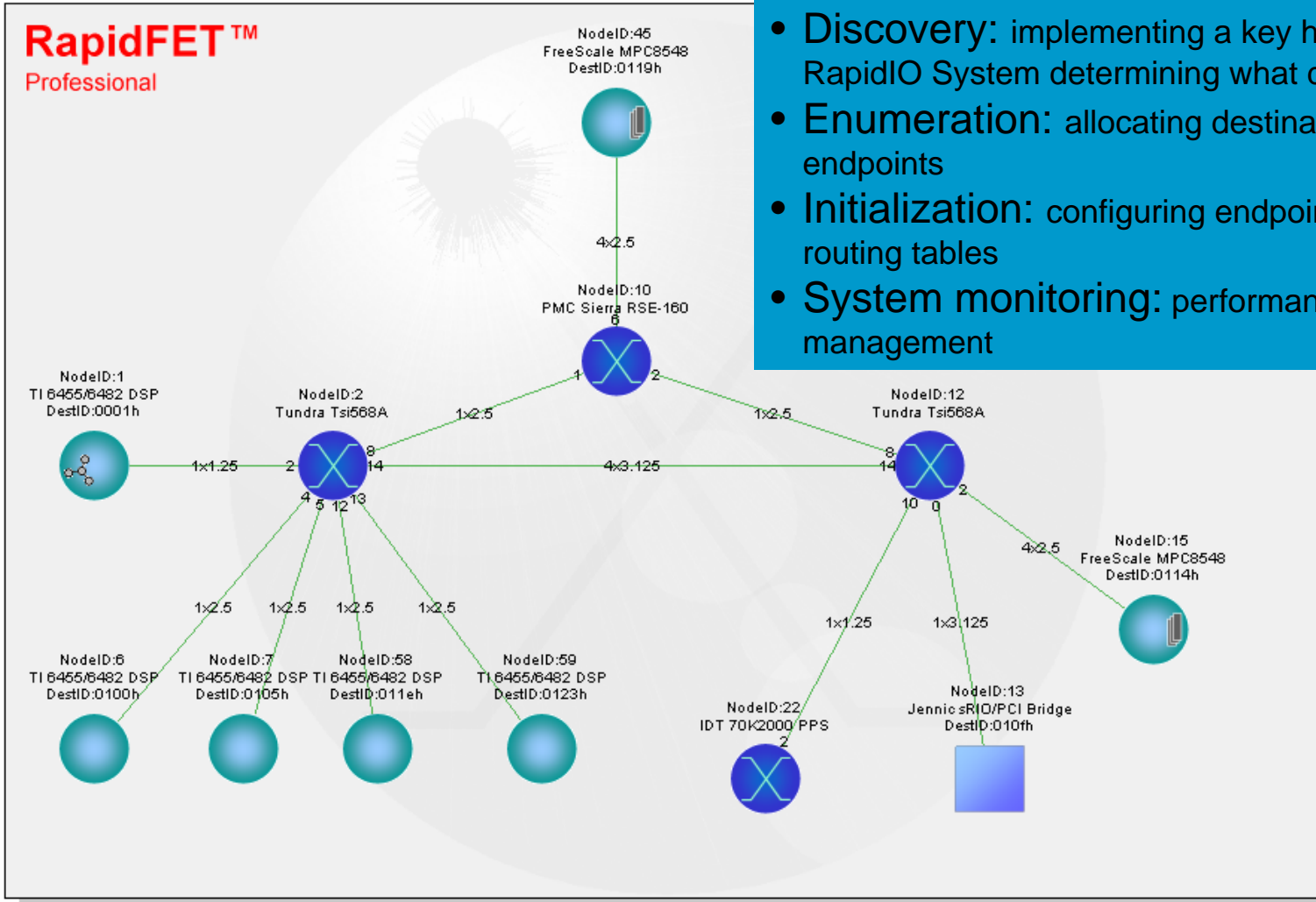
- Interactive network map
- Initialize, discover, enumerate
- Monitor errors
- Monitor performance
- Visually edit registers
- Generate traffic
- Edit, visualize routing
- Log system faults
- Generate reports
- Supports VB and Java automated control via Automation Interface

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c6455 Running as a System Host

RapidFET™
Professional

- **Discovery:** implementing a key host function in a RapidIO System determining what devices are present
- **Enumeration:** allocating destination IDs across all endpoints
- **Initialization:** configuring endpoint settings, switch routing tables
- **System monitoring:** performance, congestion, error management



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