

HPEC 2004



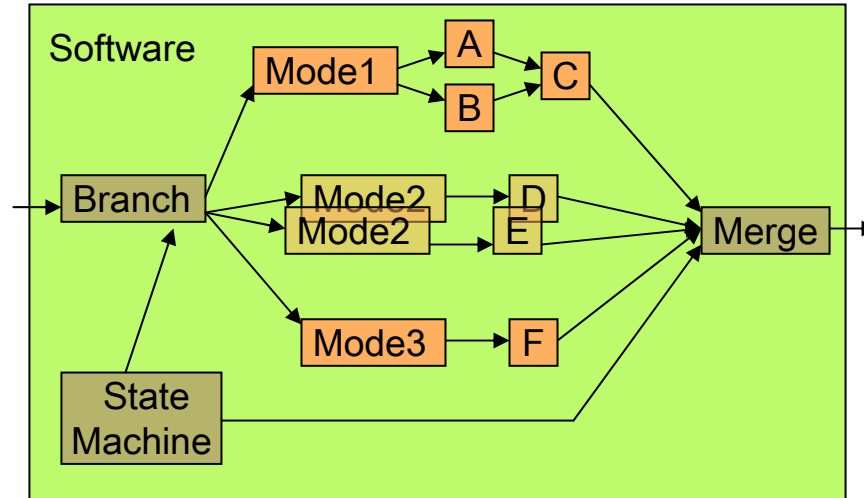
Gedae: Auto Coding to a Virtual Machine

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What is Gedae?



Gedae is a block diagram **language** ...

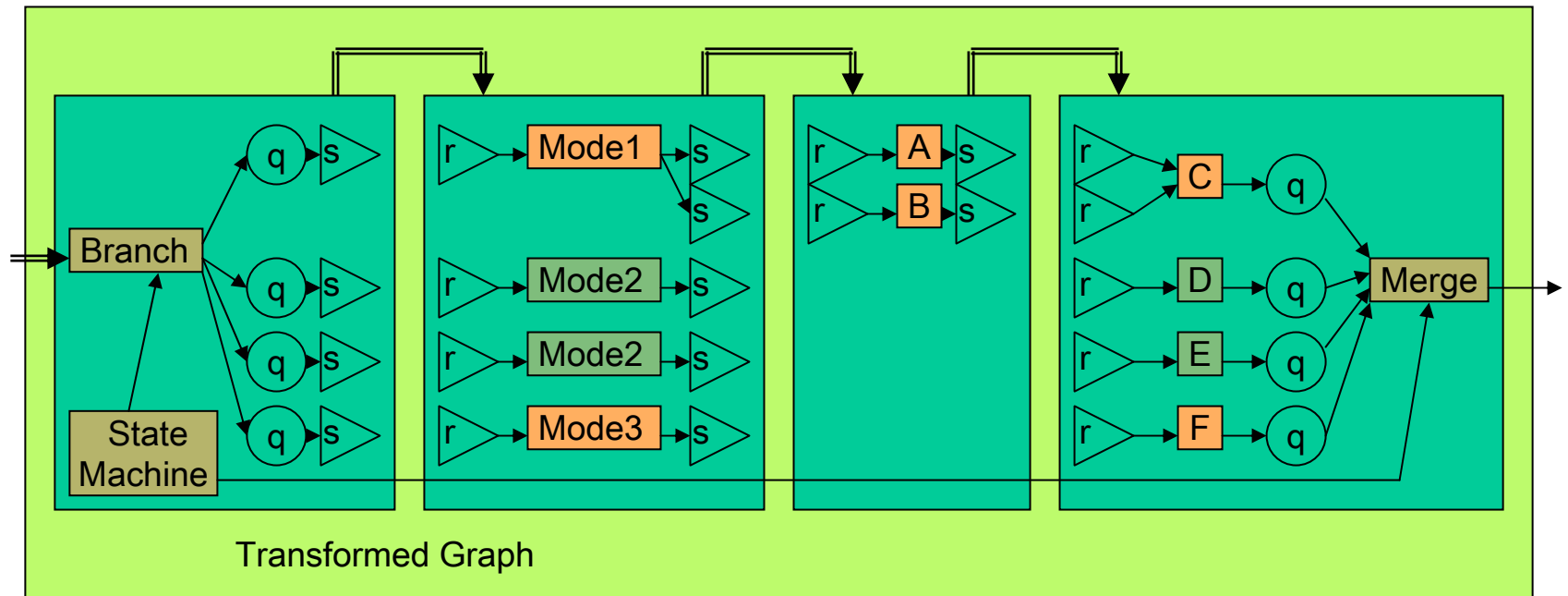


Express signal and data processing algorithms, parallelism, load balancing, fault tolerance and mode control.

What is Gedae?



..that Gedae transforms under user control...

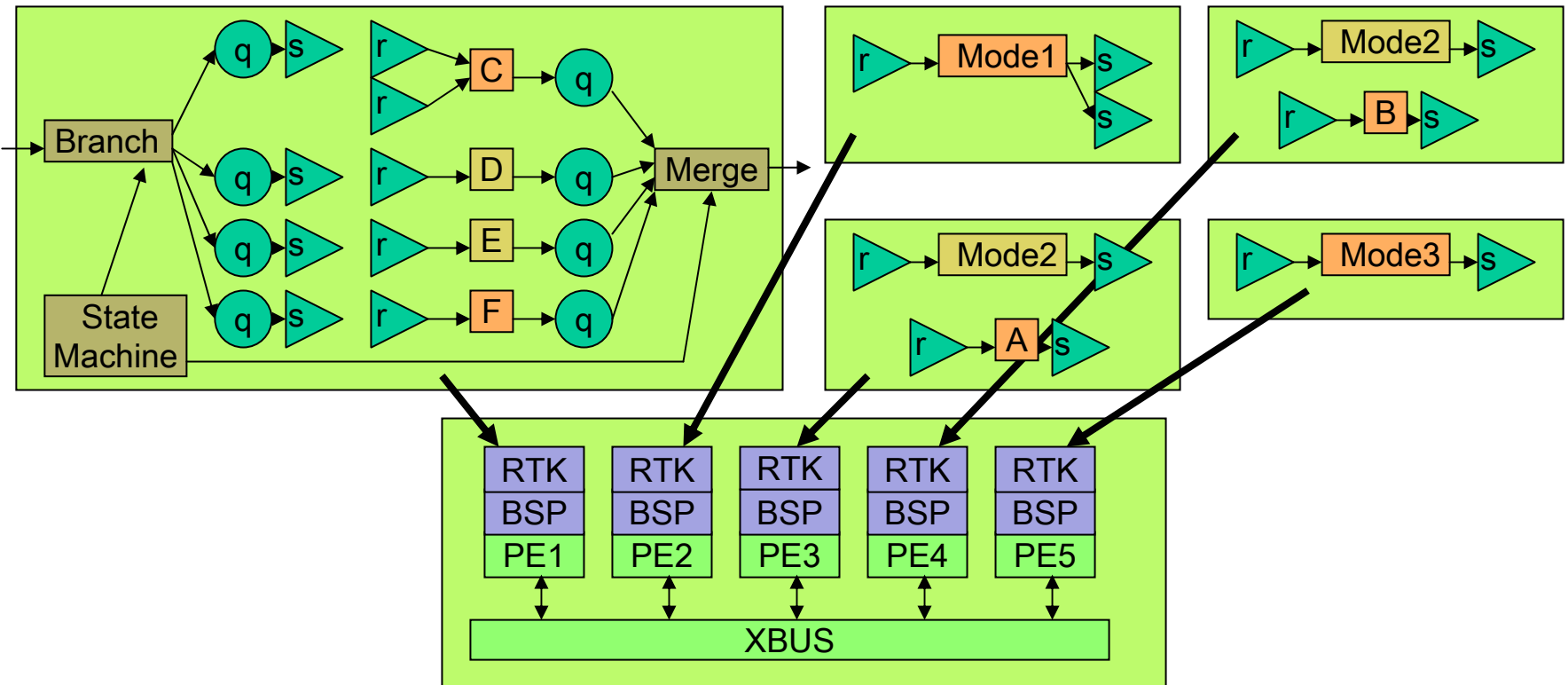


User can set optimization parameters that are independent of the graph to guide transformation

What is Gedae?



...to operate efficiently on a **virtual machine**.

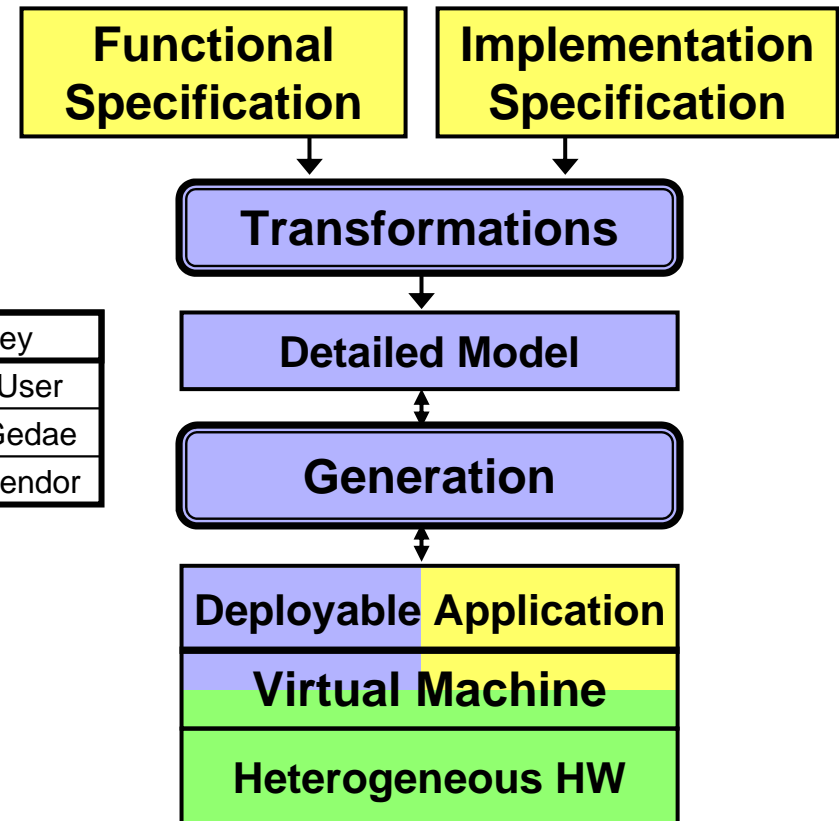


Complete systems can be developed independent of the target system without losing runtime efficiency.

Gedae's Structure

- The block diagram is transformed using over 100 algorithms.
- The transformations establish the:
 - Order of execution
 - Queue sizes
 - Granularities
 - Memory layout
 - Dynamic schedule parameters
 - Data transfer types and parameters
 - Mode control

Key	
	User
	Gedae
	Vendor



The Gedae transformations build a detailed model of the deployed application. Gedae uses that information to provide visibility.