



June 13-15, 2023

DoubleTree by Hilton San Jose

SmartNICsSummit.com

SuperPanel

The SmartNIC Revolution

Bill Wong, Moderator

(Paul Borrill, Organizer)

Panelists:

Vipin Jain – AMD, Rob Davis – NVIDIA, Paul Borrill – Daedaelus,

Brian Niepoky – Intel, Nick Ilyadis – Achronix

ETHERNET

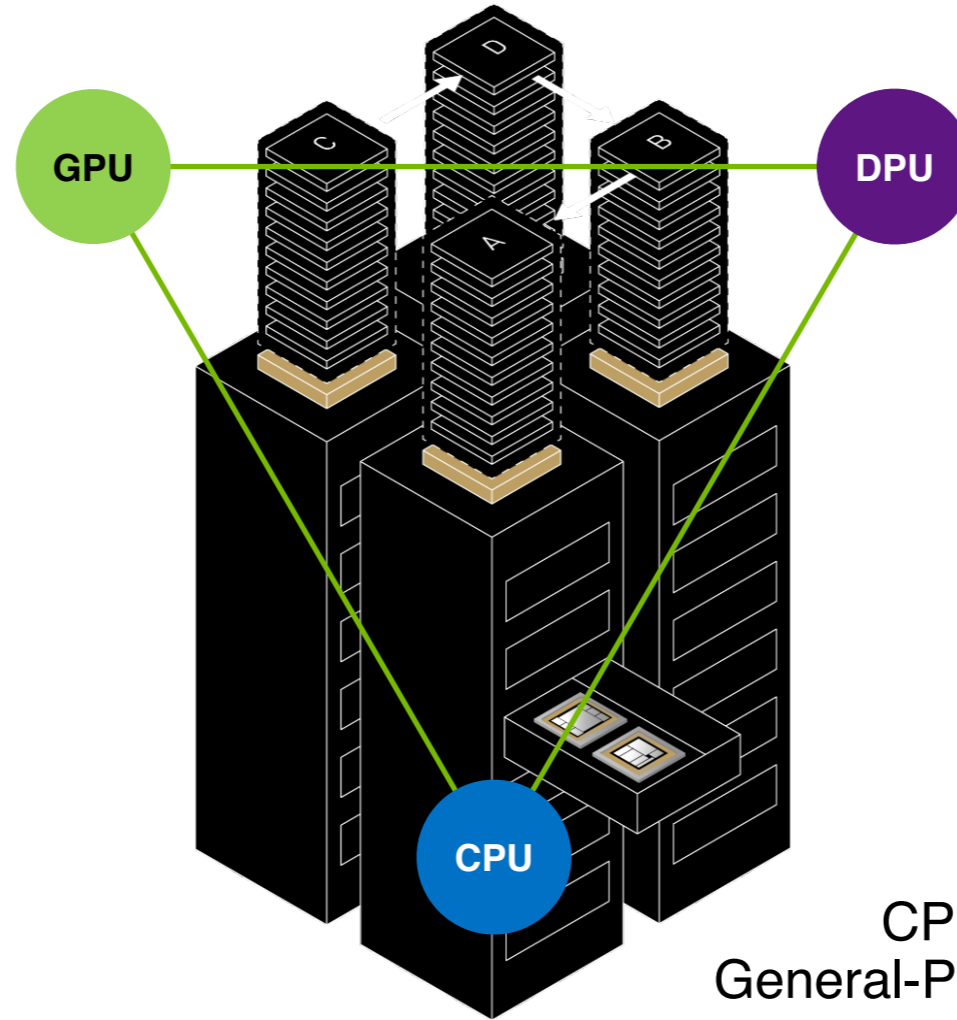
**Next 50 Years: The
SmartNIC Revolution**

50

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Going Forward – Three “U”s in The Data Center

GPU: AI and ML
Accelerated Computing



DPU(SmartNIC)
Accelerate, Offload, Secure

CPU: Host OS
General-Purpose Computing

ANIC Programmable DPU Platform

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Achronix
Data Acceleration

400G ANIC Shell – Enabling Customer Innovation

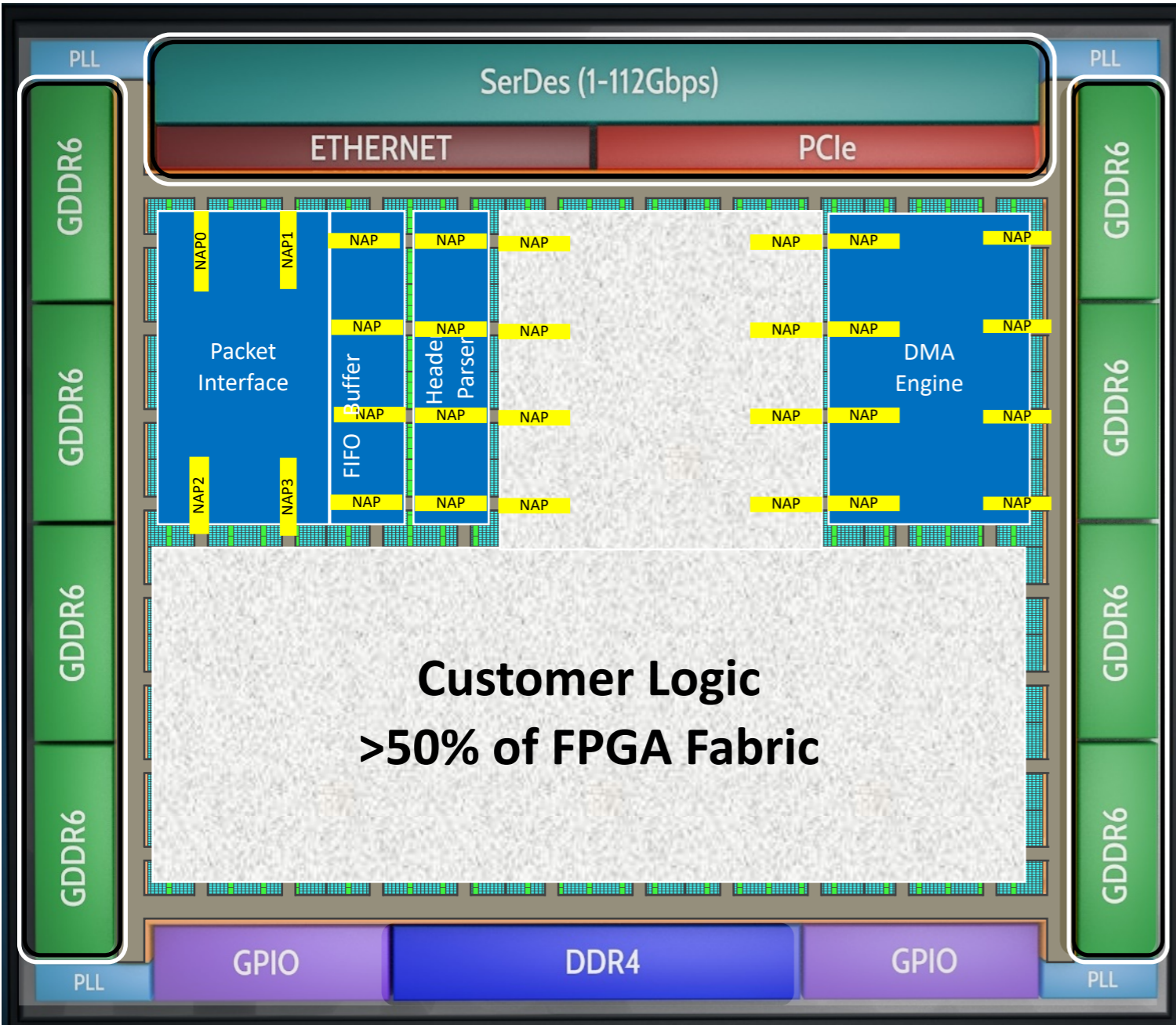
Speedster 7t family

ANIC - Achronix Network Infrastructure Code. A **complete FPGA softNIC** delivered as a collection of RTL pipeline stages including a PCIe Kernel/Bypass device driver.

ANIC Shell – Enabling Technology, a subset of ANIC RTL blocks representing core Ethernet packet flow pipeline stages and an SDK that provides a proven code base for customers to begin development.

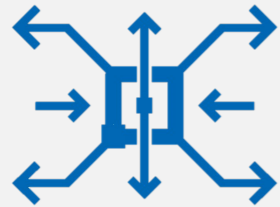
Customer Logic - can implement complex packet processing functions and flow lookups

Customer Logic - can also use the Speedster 7t inference capabilities for the fusion of Networking + Machine Learning



IPU / DPU expanding Use Cases

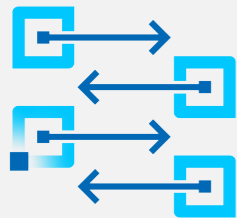
Cloud Datacenter



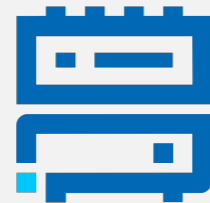
Gateway, load balancer acceleration



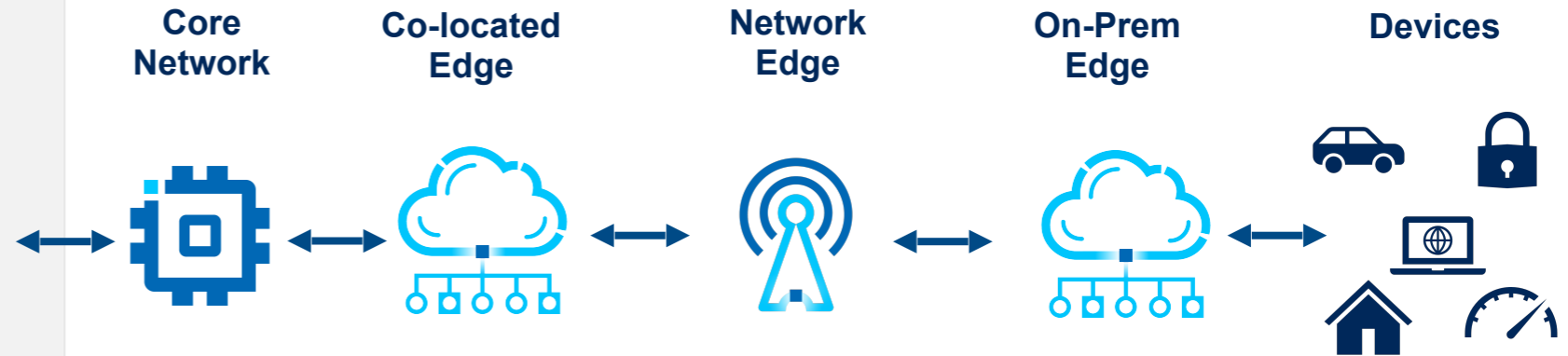
Server offload



Smart switches, appliance acceleration



Storage acceleration, data analytics, secure transport

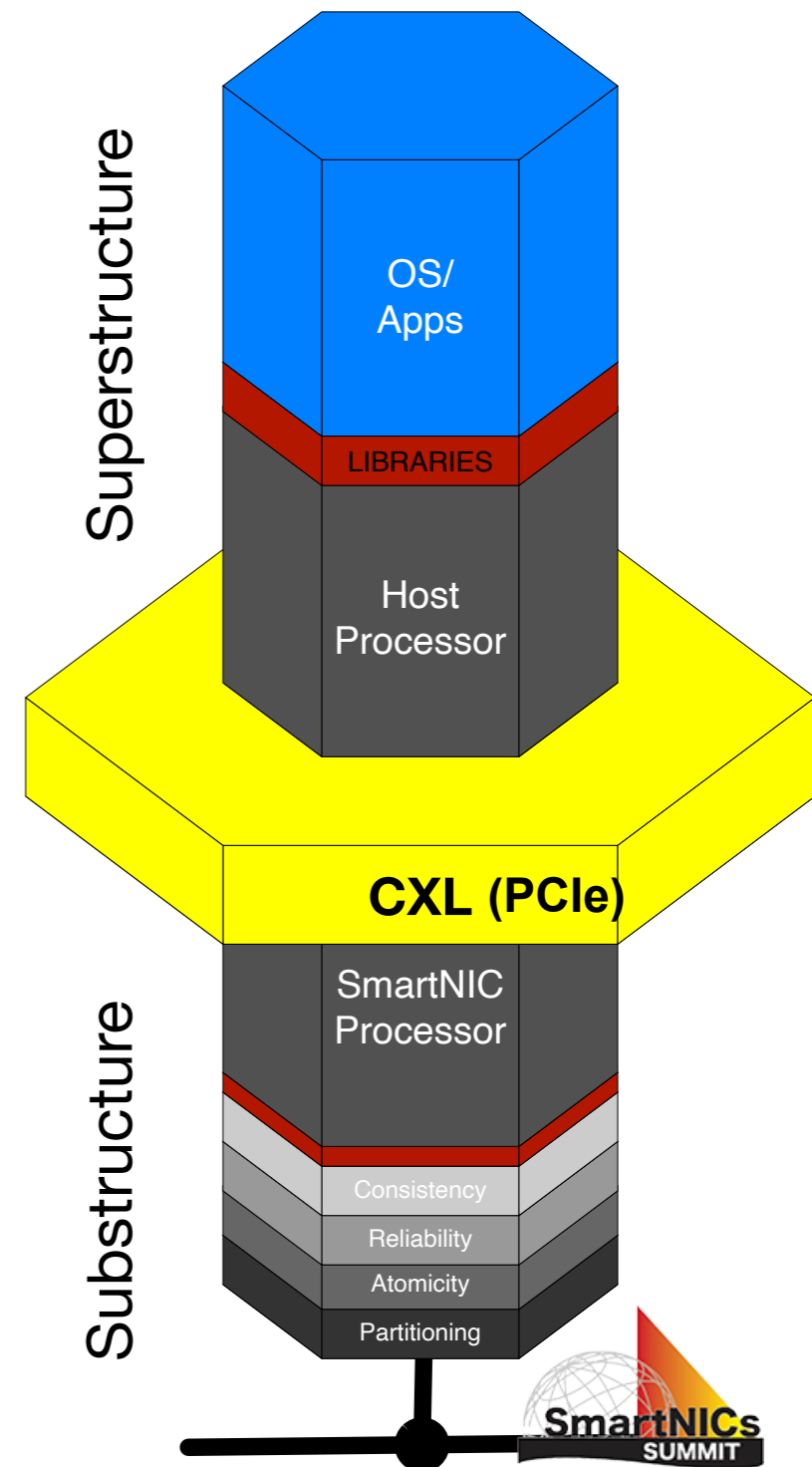


SmartNIC Skyscraper Model

- New Substructure Consortium – like SNIA
- New IEEE Standard – for Distributed Systems
- Revolutionary Technology from DAEDAELUS:
 - Willing to Share, OpenSource*, License Fairly & Reasonably

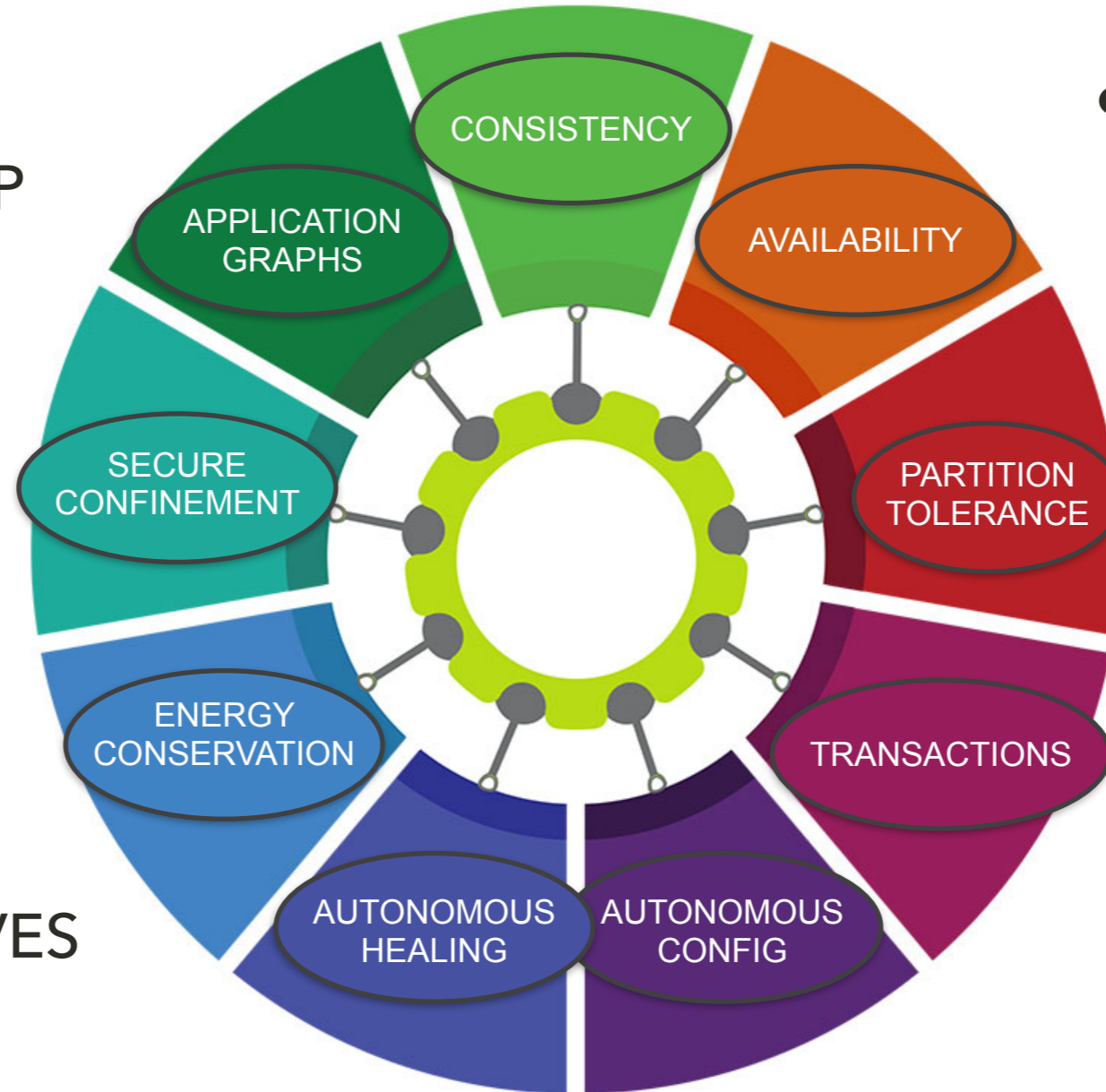
<https://github.com/JonathanGorard/Labyrinth>

*The Revolution Starts here: at the
SmartNICs Summit*



Distributed Systems API's for SmartNICs

- GREY FAILURE NEEDS OUR HELP



- KUBERNETES NEEDS OUR HELP

- SECURE ENCLAVES NEED OUR HELP

- THE CAP THEOREM NEEDS OUR HELP

- PROGRAM WITH LINGUA FRANCA

- TRANSACTIONS NEED OUR HELP

IN HONOR OF MARK CARLSON