

Open Domain-Specific Architecture

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Welcome

Our fourth workshop

- Global Foundries (Dec. '18), Samsung (Mar. '19), Intel (June '19), IBM (Sep. '19)
- Two summits – Global Summit, San Jose (Mar. '19), Regional Summit, Ams (Sep. '19)
- Became an OCP Project Mar. '19

Thank you to our hosts:

- Kevin Drucker, organized everything
- Lots of support from Dharmesh Jani, Aaron Sullivan

150+ registered attendees, across ~70 companies

- Repeat + many new

Everything on the wiki - <https://www.opencompute.org/wiki/Server/ODSA>

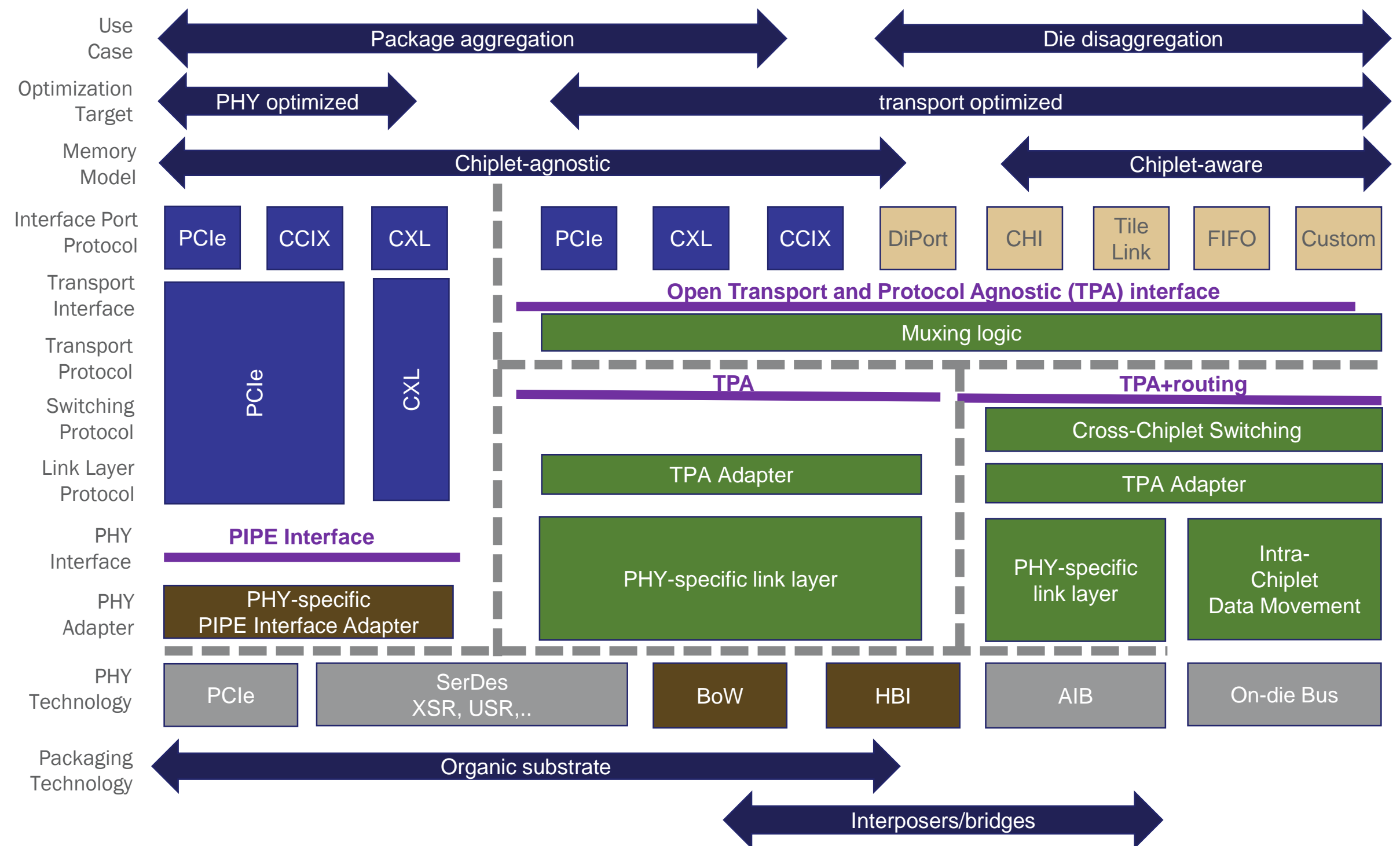
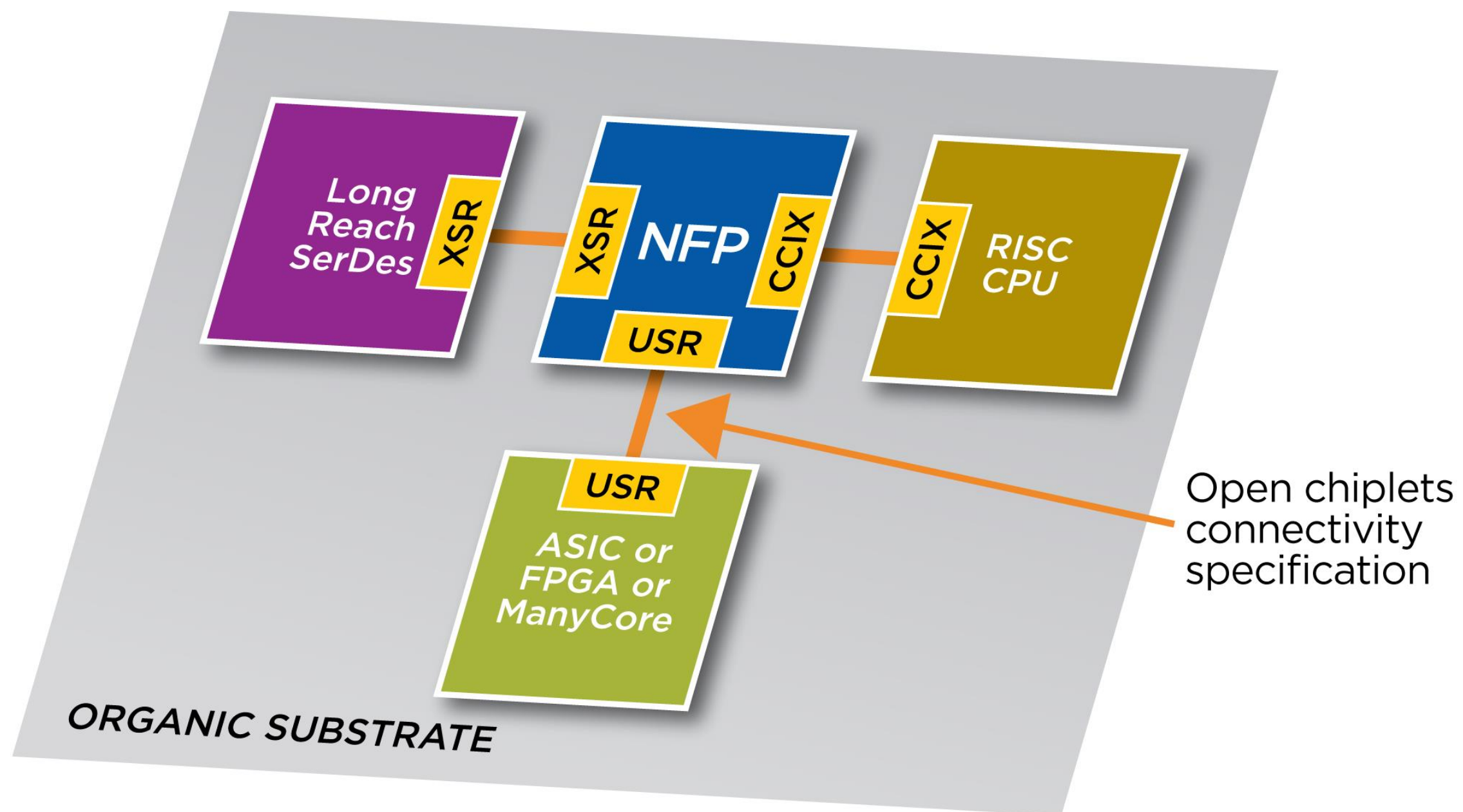


OCP
REGIONAL
SUMMIT

Open. Together.

The Open Domain-Specific Architecture

An open interface for inter-chiplet communication

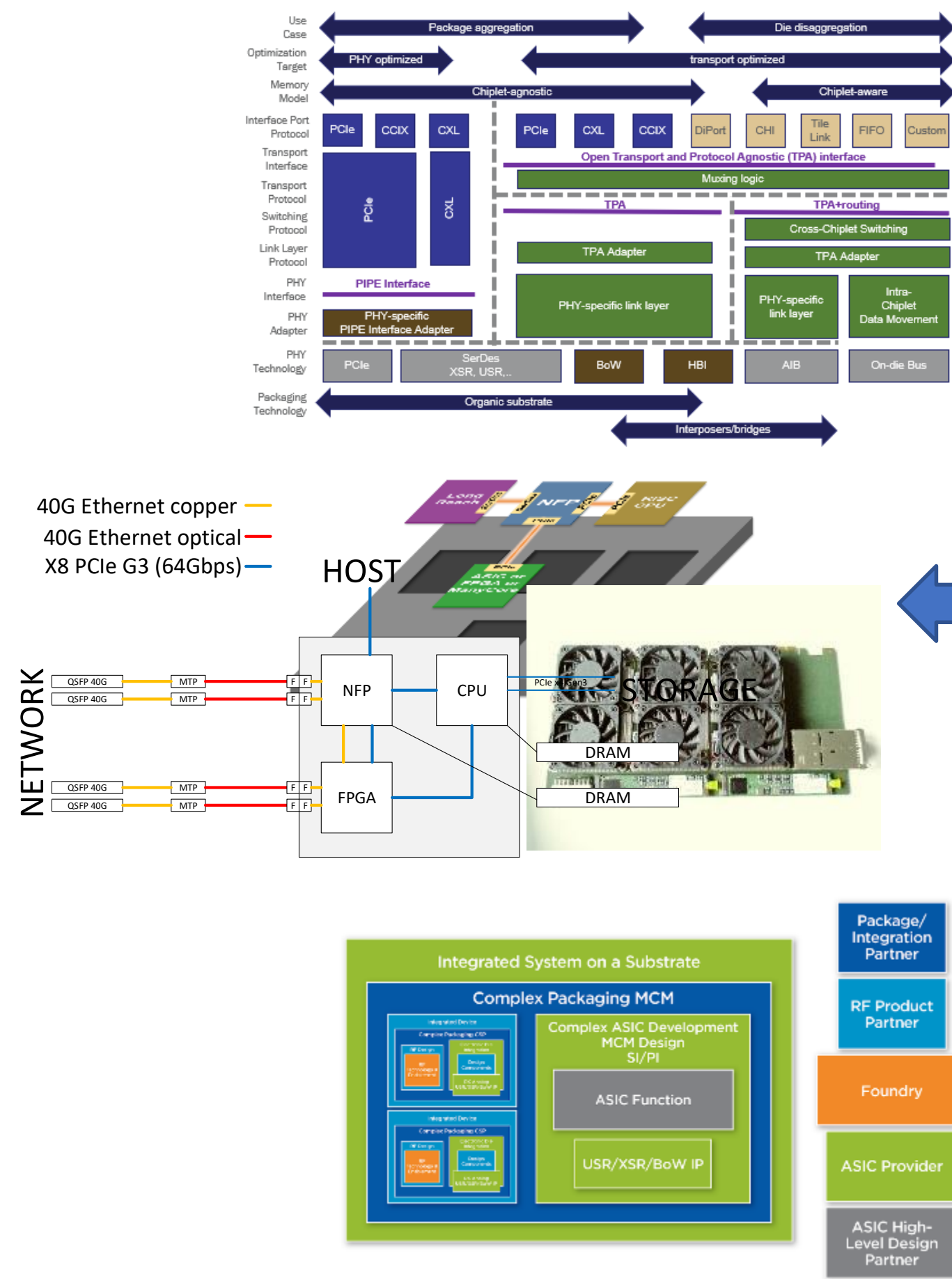


Chiplets for accelerators:

- Shrink a board into a package
- Disaggregate a complex or large die

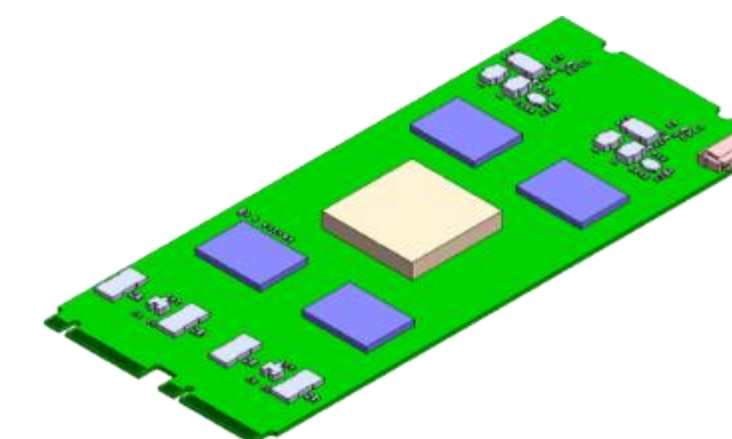
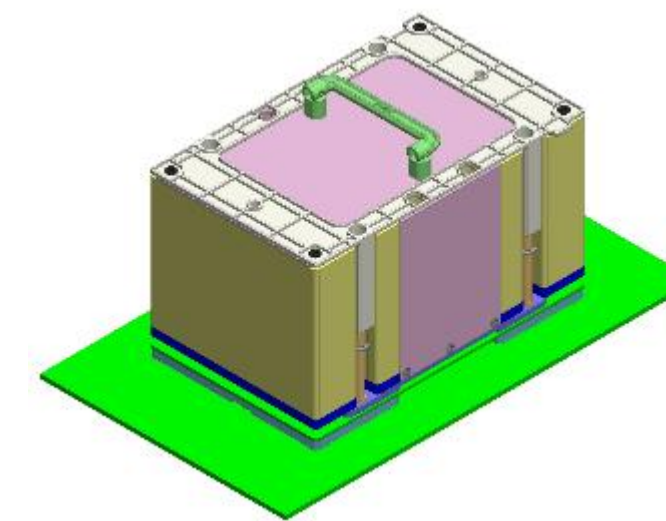
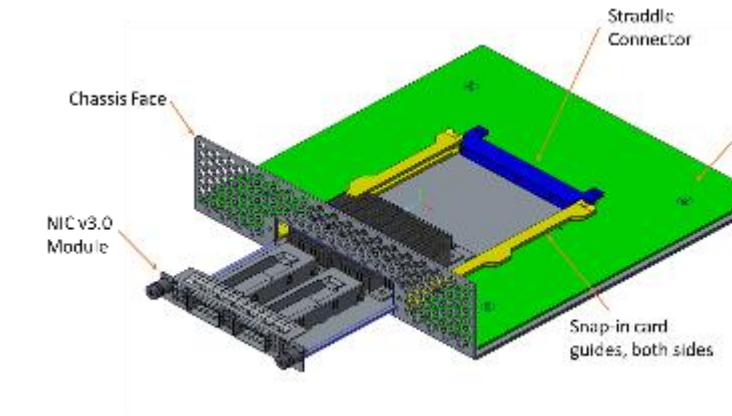
Multiple chiplets need to function as though they are on one die

ODSA Goal: Chipllet Marketplace



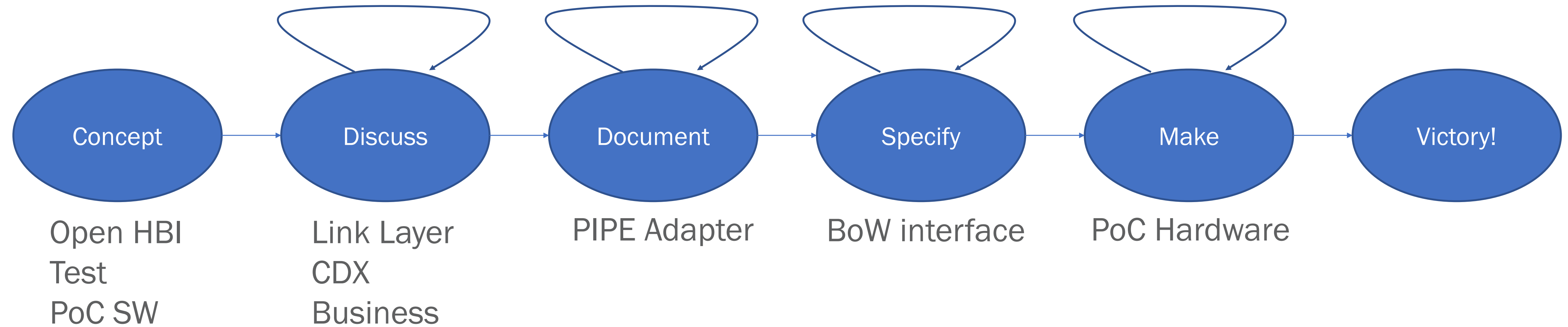
ODSA Activities

Chipllet Marketplace



OCP Use cases

Workstream Status



Current Workstreams

- PoC: huge effort into PChiptlet design, specs, start of a software discussion
- BoW interface: <https://github.com/opencomputeproject/ODSA-BoW> – lots of participation, IEEE Micro paper in January
- Mapping protocols to D2D interface: PIPE adapter (document in flight)
- Mapping protocols to D2D interfaces: Link layer and stack
- Business workgroup – Markit survey

New workstreams

- Open HBI proposal, Test panel
- Interesting talks from our host

We would nothing to report without...

People: Kamal Ahluwalia, Imran Ahmed, Shahab Ardalan, Jayaprakash Balachandran, Eelco Bergman, Shyam Chandra, Bill Chen, Rishi Chugh, Halil Cirit, Carrie Cox, Jaideep Dastidar, Kevin Drucker, Luke England, Ramin Farjad, Toby Foster, Sam Fuller, Mendy Furmanek, Michael George, Joshua Held, Rita Horner, Marc Hutner, Quinn Jacobson, Dharmesh Jani, Brian Kahne, David Kehlet, Mark Kuemerle, Kenneth Ma, Raj Mahajan, Gary Miller, Millind Mittal, Jawad Nasrullah, Peter Newton, Manish Sinha, Michael Spear, John Stonick, Aaron Sullivan, Ahmad Tavakoli, Robert Wang, Jerrold Wheeler, Alex Wright, Chenyu Xu, Larry Zu,...

Companies: Achronix, AnalogX, Ayar Labs, Cadence, Cisco, Facebook, Google, IBM, Intel, Lattice, Macom, Marvell, Netronome, NXP, Samtec, Sarcina, Synopsys, Xilinx, zGlue

Agenda

Start	End	Session #	Topic	Speaker	Affiliation
Please plan on arriving at 9 AM, it will take you 30 minutes to park at Bldg. 41, take a shuttle and arrive at Bldg. 15					
9:30	9:35	Introduction	Welcome	Kevin Drucker	Facebook
9:35	9:50		Agenda, update, highlights	Bapi Vinnakota	OCP
9:45	10:10	Facebook Talks	Facebook tech talk 1 - Co-packaged Optics	Katharine Schmidkte	Facebook - Supply Operations Engineering
10:10	10:35	moderator Kevin Drucker	Facebook tech talk 2 - D2D Interface	Ron Ho	Facebook - AR/VR
10:35	11:00		IHS Markit survey results + Business workstream update	Sam Fuller	NXP
11:00	11:20	Break	Break (sponsored by Facebook)		
11:20	12:20	Protocol Mapping David Kehlet	Mapping protocols to D2D PHYs (Link Layer, PIPE, DiPort)	David Kehlet, Jaideep Dastidar, Sam Fuller, Imran Ahmed	Intel, NXP, Xilinx, AnalogX
12:20	13:00	Break	Lunch (sponsored by Facebook)		
13:00	14:00	PoC JP	PoC Discussion	JP Balachandran, Joshua Raiff, Jawad Nasrullah, Sam Fuller, Jim Tavecchi, Quinn Jacobson	Cisco, Facebook, zGlue, NXP, Lattice, Achronix
14:00	14:20	D2D Session	Open HBI D2D Interface Workstream	Kenneth Ma	Xilinx
14:20	14:40	moderator: Rita Horner	Cadence D2D Interface	Rishi Chugh/Wendy Wu	Cadence
14:40	14:50		BoW workgroup status update	Ramin Farjad	Marvell
14:50	15:10		BoW interface initialization and calibration	Prakash Radhakrishnan	SiFive
15:10	15:30	Break	Break (sponsored by Facebook)		
15:30	16:30	Test Panel moderator: Karthik Natarajan	Chipselets test panel	Dave Armstrong, Rajamani Sethuram, Liz Jensen, Karen Darbinyan	Advantest, Synopsys, nVidia, Cadence
16:30	16:40	Workflow and	CDX workstream updates	Jawad Nasrullah	zGlue
16:40	17:00	Business moderator: Sam Fuller	Multiphysics simulation for chiplets	Chris Ortiz	ANSYS
17:00	17:30	Buffer			
17:30	18:30		Social Hour and more SWAG Hand-Out (SWAG will be FB Cups, Pens, Stickers, Journal books.)		