2015中国DPDK开发者大会
China DPDK Summit 2015

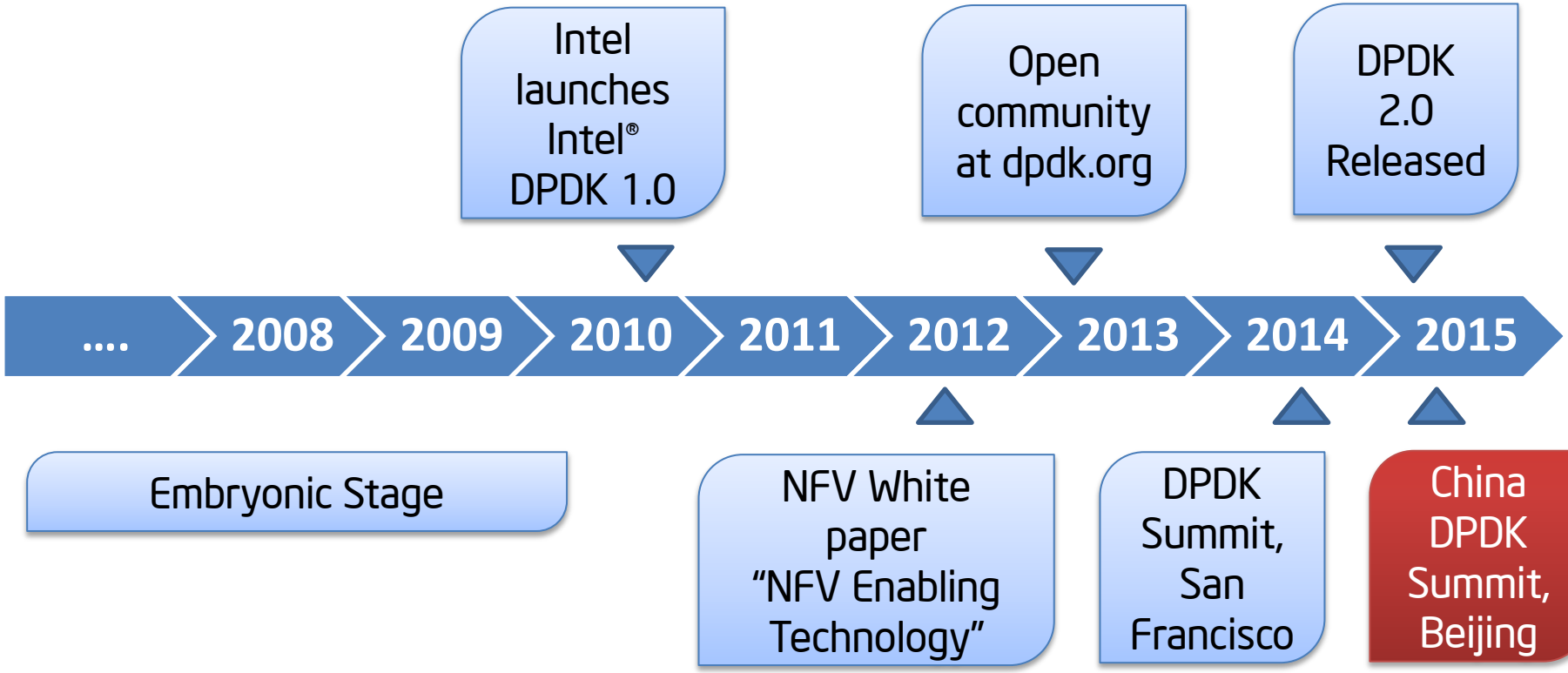
Presented By:

中国移动 China Mobile | 中国电信 CHINA TELECOM | HUAWEI | intel | ZTE

A Community Driven Innovation Age

Lynn Comp, Intel Corporation

Data Plane Development Kit Evolution

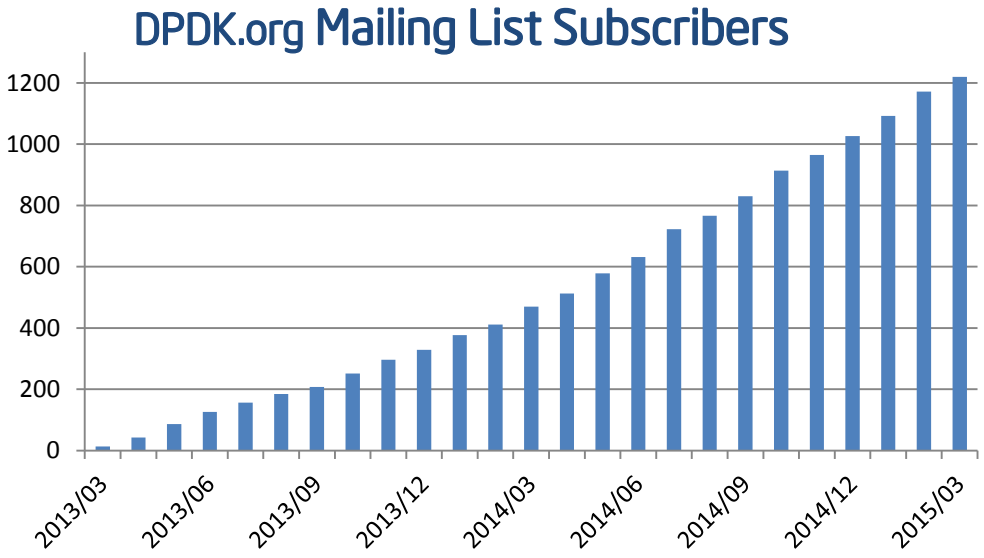


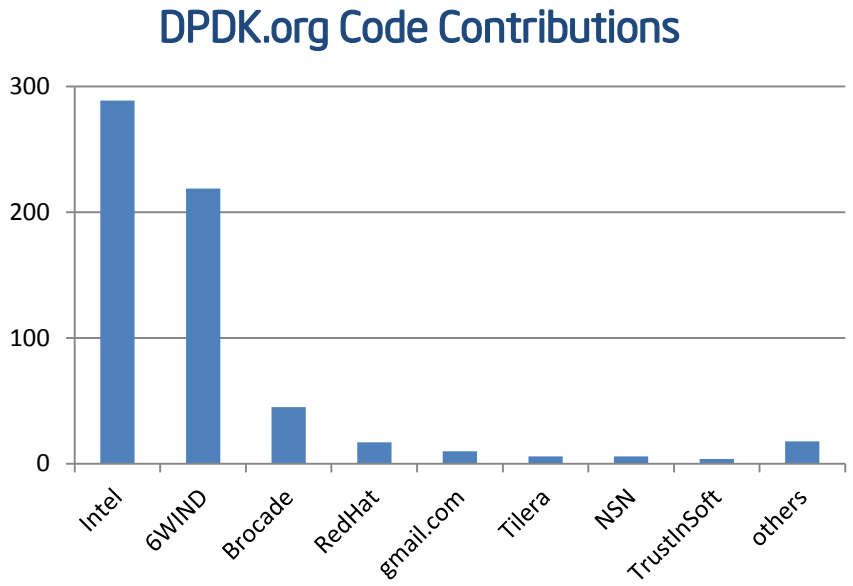
DPDK Today

1.5 Million LoC **1220** Members **60** Authors **23** Maintainers

DPDK Community Snapshot

- DPDK has a vibrant and growing community



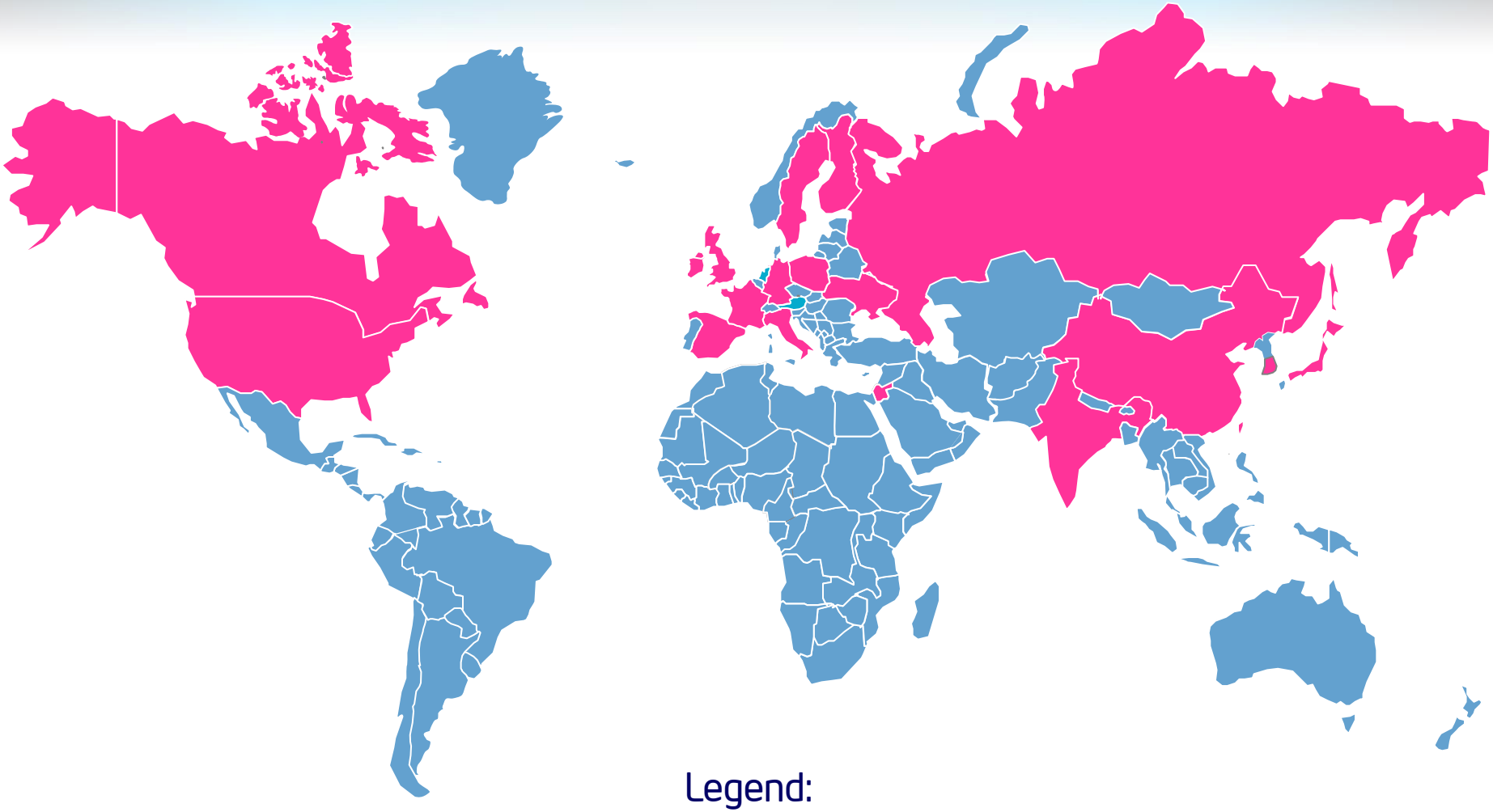


- Multi-CPU architecture: Besides Intel, IBM/Freescale PowerPC, EZChip/Tilera CPU architectures are supported
- Multi-Vendor NIC: Cisco UCS VIC, Broadcom, and Mellanox are supported today; Microsoft Hyper-V PMD on roadmap
- Community regularly meets on conference calls and at DPDK Summit
  - *Next DPDK Summit will be held in the Bay Area, USA.* *Visit: www.dpdksummit.com*

Celebrating Chinese DPDK Engineers

Note: Data represents DPDK code contributions made by Chinese engineers on dpdk.org git tree since April 2015.

Worldwide DPDK Developer Community



Real World DPDK Deployments

Brocade vRouter 5600

http://www.brocade.com/products/all/network-functions-virtualization/product-details/5600-vrouter/in

Telefonica

http://www.convergedigest.com/2014/08/telefonica-tests-network-functions.html

Juniper OpenContrail

http://www.opencontrail.org

ADLINK DPDK Toolkit

http://www.adlinktech.com/Telecommunication/ADLINK-DPDK-

Alcatel Lucent VSR

http://www.gazettabyte.com/home/2014/11/20/alcatel-lucent-servers-on-x86-based-io-edge-routing.html

"Alcatel-Lucent claims a two rack unit high (2RU) server hosting two 10-core Haswell Intel processors achieves 160 Gigabit-per-second (Gbps) full-duplex throughput. The company has worked with Intel to determine how best to use the chipmaker's toolkit to maximise the processing performance on the cores."

"Using 16, 10 Gigabit ports, we can drive the full capacity with a router application," says Gulyani. "But as more and more [router] features are turned on - quality of service and security, for example - the performance goes below 100 Gigabit. We believe the sweet-spot is in the sub-100 Gig range from a single-server perspective."

In comparison, Alcatel-Lucent's own high-end network processor chipset, the FP3, that is used within its router platforms, achieves 400 Gigabit wireline performance even when all the features are turned on.

INTEL CONFIDENTIAL TRANSFORM

China Telecom NFV Smartpipe on Intel® ONP

What does it do?

- China Telecom & Intel jointly developed a PoC for Smartpipe with Programmable Forwarding capability, based on Intel® Open Network Platform
- vBNG virtualize part of the function at IP Edge, with Service Function Chaining implementation
- Plan for commercial trial in China Telecom Guangdong province

China Telecom NFV Smartpipe

MWC | 15

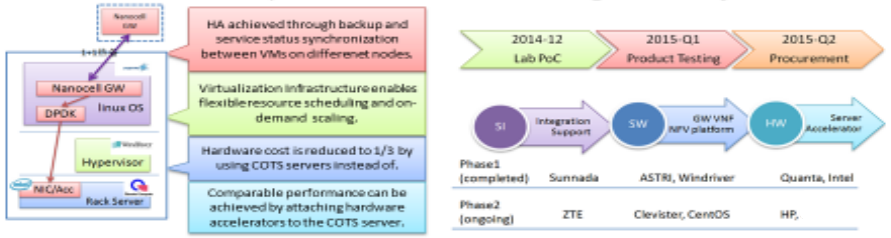
Nanocell GW NFV

NFV enables Highly extensible Nanocell GW on low cost COTS servers.

Motivations : Reduced CAPEX + Enhanced Flexibility + Future Orientation

- Reduce the CAPEX for Nanocell GW deployment by replacing dedicated hardware devices with off-the-shelf rack servers.
- Enhance the flexibility in functionality/compacity configuration based on COTS server through on-demand automatical scaling capability of a virtualized resource pool in stead of physical addition/removal operations.
- As a new device, Nanocell GW eases the introduction of NFV technology to the production network.

Current Status : Completed PoC + Product testing + Industry Promotion



We would continue to drive the GW industry to move to NFV direction.

And many more ...

DPDK Silk Road

- Bring your best Packet Processing Ideas alive with DPDK
- Make the DPDK community strong with your innovative contributions
- Innovate locally, WIN globally

Background Image Credit: Wikipedia, Apr '15

Thanks