New Era of Networking is Here!

- Disaggregation
- Softwarization & Virtualization
- Open Source
Disaggregation and Open Source Software

Network Control & Management Applications

Many open & closed

Open O

OSM

ONIE, ONL, FBOSS, OVS, SONiC, P4, ...

Merchant Silicon

White boxes w/ open source

Open source

Network OS
Can we declare success?

Not Really...
We solved some problems and created new ones...
State of the Industry

1. Disaggregation
2. Softwarization
3. Open Source

ONIE, ONL, FBOSS, OVS, OF-DPA, P4, ...
CORD
OSM
Open O

Closed Proprietary

OSM, Open O

OpenStack
OpenDaylight
ONFV

Many Vendor Solutions

Incremental solutions with open source components

Winning the battles and losing the war!

High capex/opex
Lack of automation
Lack of customization
Difficult to innovate

Difficult to consume
disaggregated components
Community Challenge One

Closed Proprietary

1. Disaggregation
2. Softwarization
3. Open Source

OSM  Open O

ONIE, ONL, FBOSS, OVS, OF-DPA, P4

CORD

OpenStack

ONIE, ONL, FBOSS, OVS, OF-DPA, P4

Difficult to innovate
High capex/opex
Lack of automation
Lack of customization

Difficult to consume disaggregated components

Create Open Source Integrated Solutions

With scalability, performance, HA, ease of use & deployment

Enable (service) innovation
Capex/opex efficiencies
Automation/customization
Community Challenge Two

Open source integrated & e2e solutions require standards

Open Source

Gaining significance but does NOT eliminate the need for standards

Standards

Have problems; losing significance for some “good reasons” but we need them

Get the best of both
Many corporate leaders believe “Open source is a strategic weapon to get a competitive advantage”

This leads to gaming the system

To keep open source really open and free of undue corporate influence
ONS 2016

Integrated Open Source Solution

Panel on Bringing it all Together

Open Source and Standards

Need more candid discussion...

Open Source In Practice
John Donovan, AT&T CSO and Group President

The person who is transforming AT&T and in the process transforming the industry.
A Big Champion

Contributor

A Big Consumer/User

Disaggregation

Softwarization & Virtualization

Open Source