





OPEN NETWORKING FOUNDATION



Evolution: From Paper to PoCs & Open Specs to Open Source

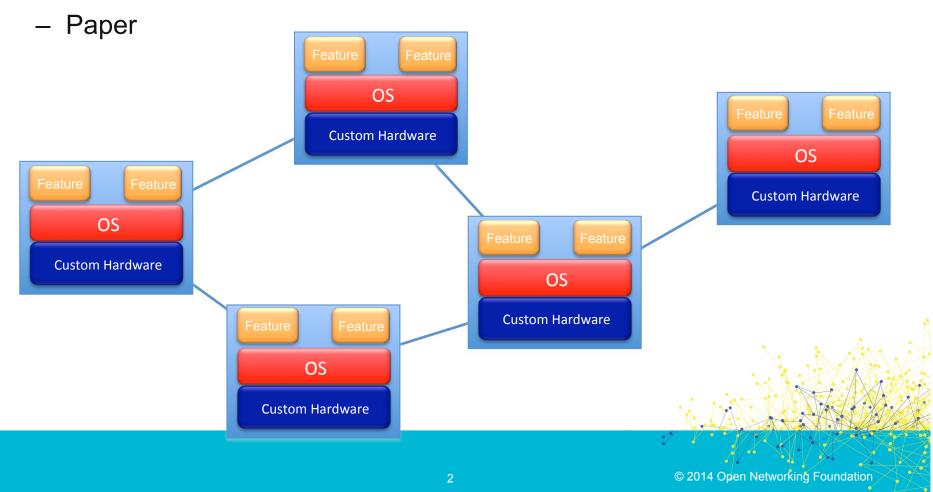
Dan Pitt
Executive Director
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- How networking evolves
- How SDN evolves
- How ONF evolves

Old Internet Networking



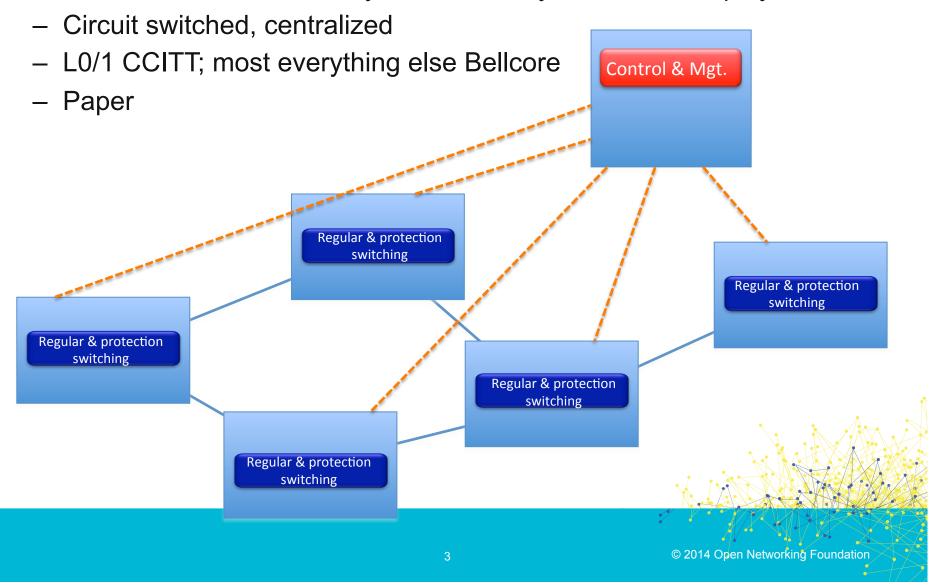
- Protocol standards devised by a committee years before deployment
 - Packet switched, distributed
 - L0/1 ITU; L1/2 IEEE; L3-4 IETF



Old Telecom Networking



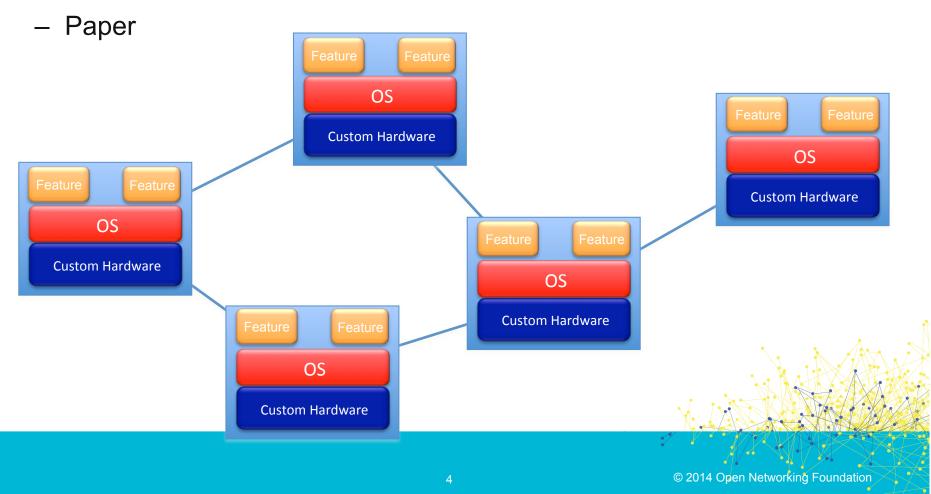
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Evolved Telecom Networking



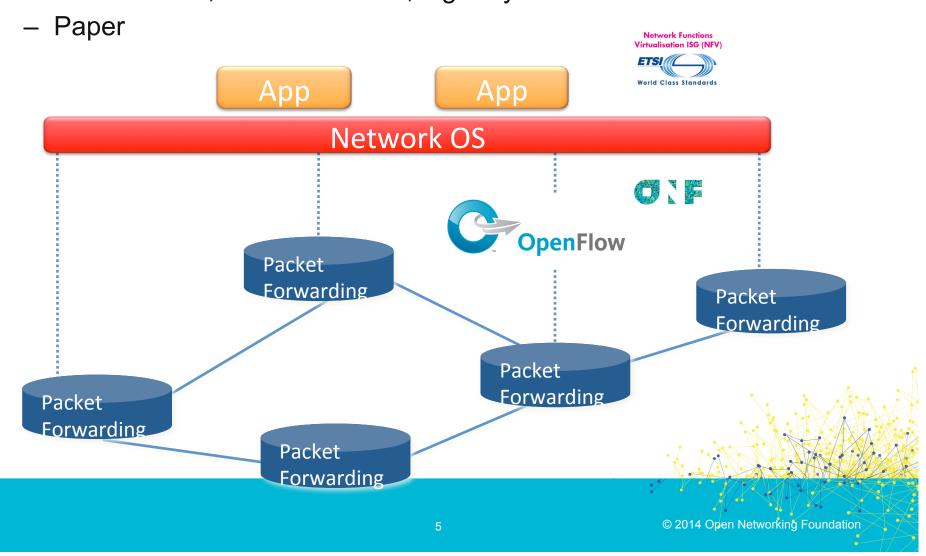
- Protocol standards devised by a committee years before deployment
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 - L0/1 ITU; L1/2 IEEE; L3-4 IETF; L5-6 MEF; L7-8 TMF



Old SDN



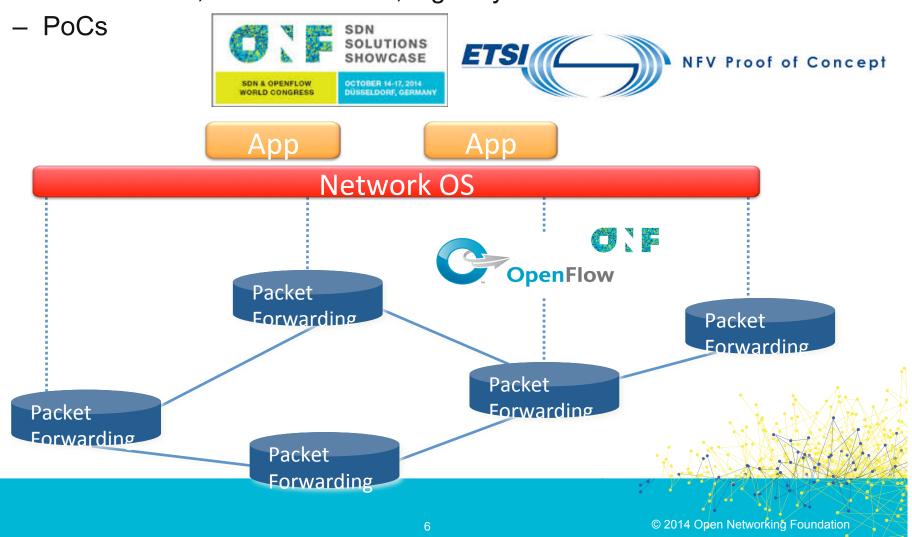
- Protocol standards devised by a committee years before deployment
 - L0/1 ITU/OIF; L2-7 ONF/ETSI, logically centralized



Evolving SDN



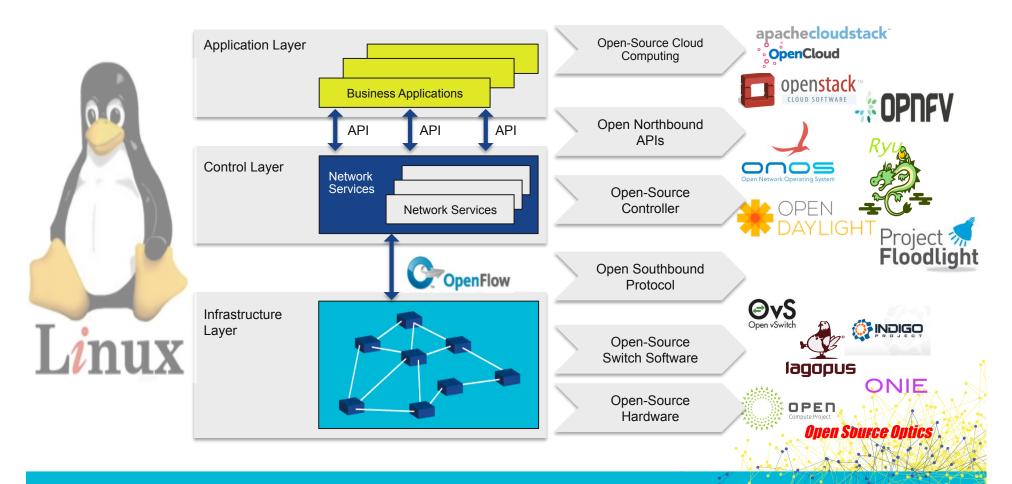
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Evolved SDN



- Put out the code
- Whatever the community ends up liking there's your standard



Evolving ONF

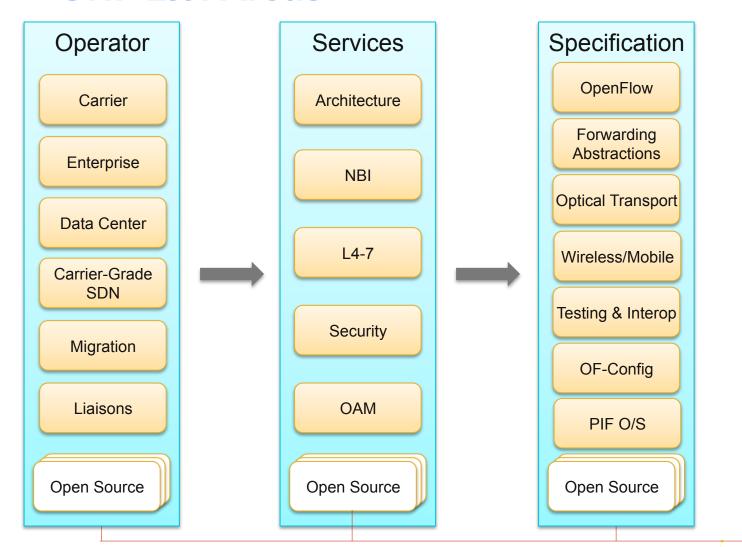


- Wire protocols, testing, frameworks as needed
- FOSS: Free and Open-Source Software
 - OpenFlow driver
 - ONF SampleTap
 - TTP in OpenDaylight
 - Intent Framework NBI in OpenDaylight
 - Real-Time Media NBI for Unified Communications
 - OF 1.x in OVS
 - OF-Config in OVS
 - ONFtest
 - Intermediate Representation of PIF
 - Segment Routing w/OpenFlow in ONOS
- More to come
 - From ONF projects; from the community
- Opening for a Community Manager



ONF 2.0: Areas







DevOps: Specs/PoCs/Open-Source

Lessons



- Committees: too slow, isolated from experience
- Paper: not consumable
- Software: needs coders, not committees
- FOSS: for common building blocks
 - Better than a monopoly, duplicative effort

Conclusions



- SDN: N enters the world of S
- S: learn by doing
- FOSS: community is king



ONF: evolving to accelerate the adoption of open SDN