Next Generation 100G Optical Ethernet-

OFC/NFOEC 2012- Ethernet Alliance Program

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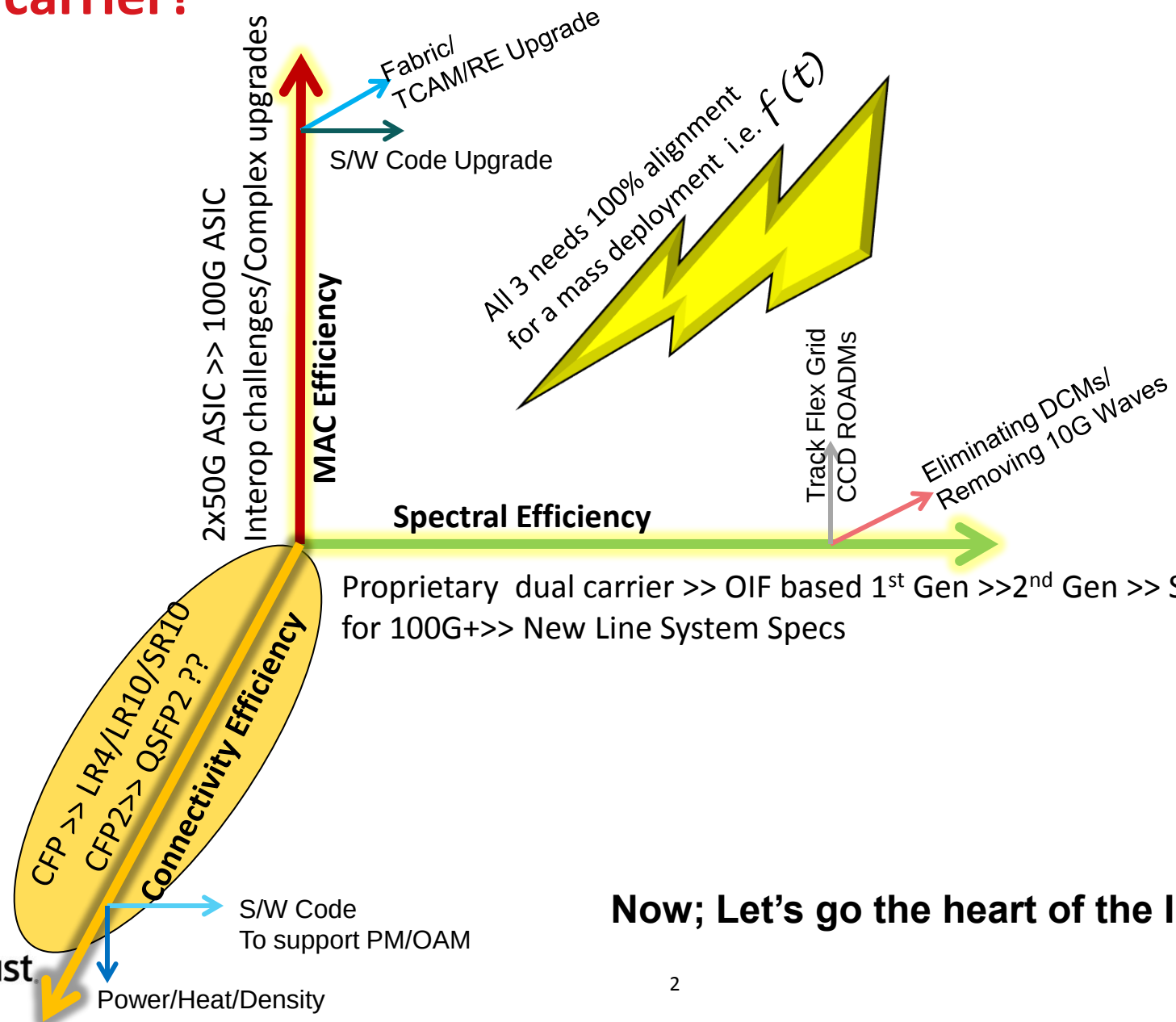
What did it take to land 100G technology to a carrier?



Now; Let's go the heart of the Internet …>>

So… what does the lower layer expects from 100G

A Router @100G will need to do it's traditional function at x10 the speed!

> Strip lower-layer information from an incoming packet
> Queue it
> Perform a route lookup, & send to the proper outbound queue to be Packetized
> Perform filtering
> SLA monitoring and policing
> Class of service / quality of service (CoS/QoS) prioritization
> Exchange per-VPN MPLS label information
> Build multicast routing trees
> Perform routing table updates for multiple protocols
> Maintain statistics and logs (performance, alarm, event and failure)
> Perform firewall and security functions

Business Continuity check List:

Can't drop packets

Can't introduce extra Jitter and Latency

Can't compromise VPN boundaries

Can't reorder packets

Oh BTW…All Must Happen in IPV4+1PV6 Dual Stack Environment!!

What's the ask…?

- Need a 1Terabit line card now
- Need 25G I/O speed now
- Silicon Photonics is a reality now
- If still needed then let the Gearbox be in switch/router line card and let IEEE focus on optical form factor reduction
- 4x25G QSFP seems to be a right form factor in order to address the face plate density needs
- "100G LAN reach" depute is use case specific; let the standards body work on addressing 80% of the use cases and NOT get bogged down by the rest 20% niche
- Need sustainable & interoperable form factor for an optimal TCO

Thank you!

Questions/Comments?

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