

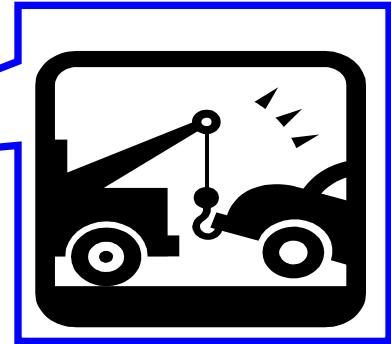
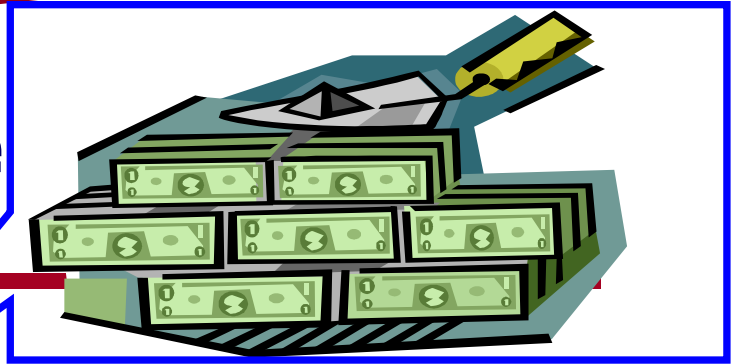
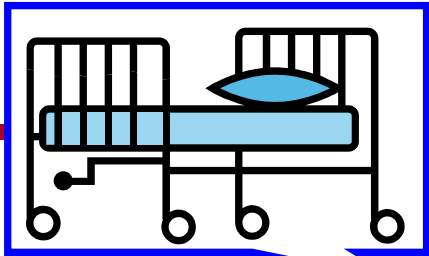
Issues in Broadband Architecture

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Perspective



Complexity



Complexity



Complexity

- Networking is complex
- We don't need to do everything just because it is possible
 - Domain wide labels
 - Pre-computed label stacks
 - etc ...

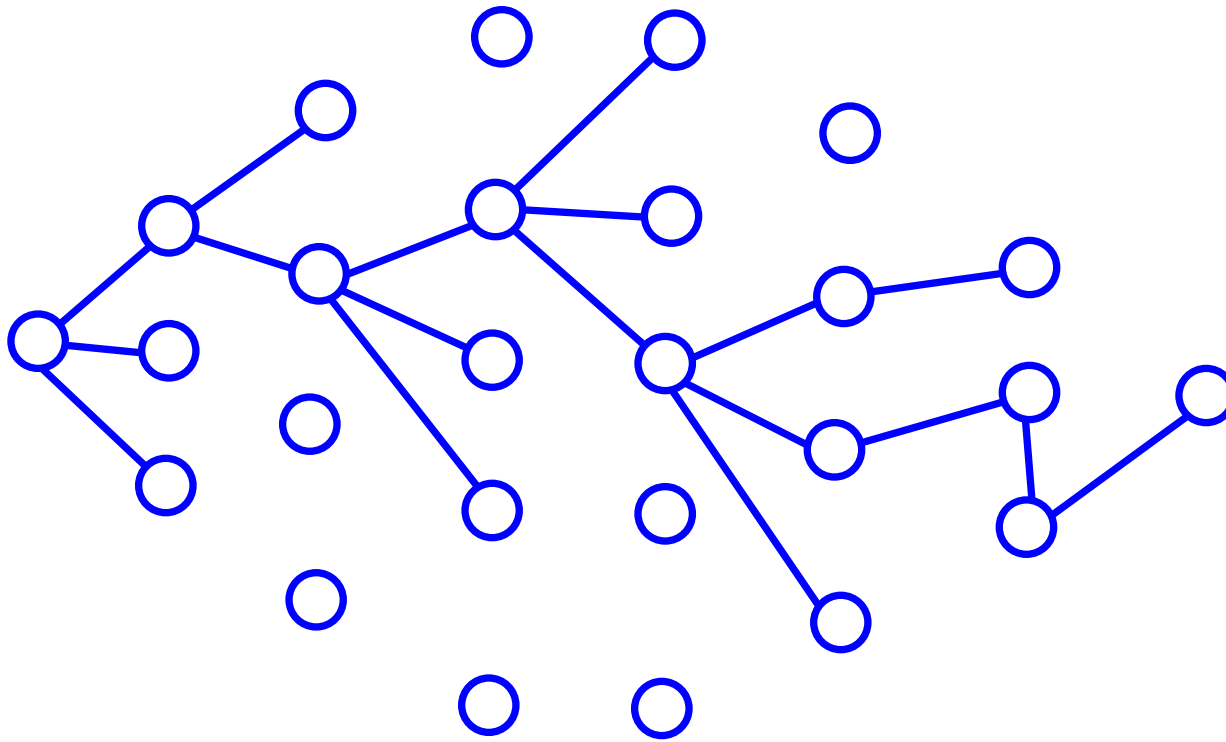
Out of the ashes into the fire

- Traffic engineering
- Deterministic set up
- Or trial and horror

The Traffic Engineering Dilemma

**“Oh no I've said too much
I haven't said enough”**

Crank back?



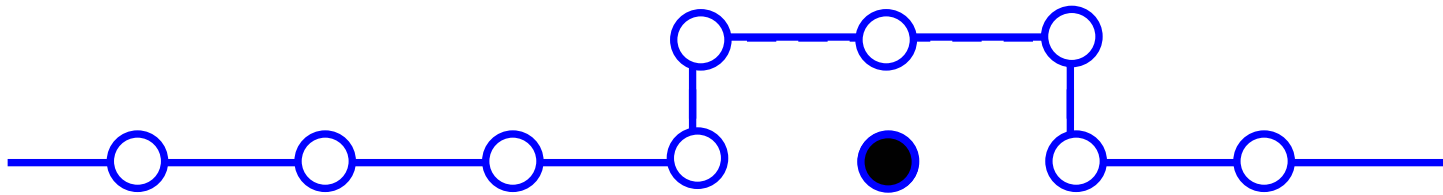
Crank back!

- Useful mechanism!
- Processing intensive
- But hardly the generic TE mechanism.

Huge areas

- Alternative approach
- Single area (domain that shares TE information)
- Caveat
 - Nation wide network (500 routers)
 - Full IP/Optical integration (3 – 6 times that many nodes)
 - Domains becomes huge
 - Processing time will be “long”
 - Stress on lower layer nodes

Optical constraints



Optical Constraints

- Router or L2-switch network
 - No fuss
- Transparent Optical network
 - Dispersion (distance dependent)
 - Need to go to the electrical domain
- Need a set of optical constraints