

UiO : Faculty of Mathematics and Natural Sciences
University of Oslo

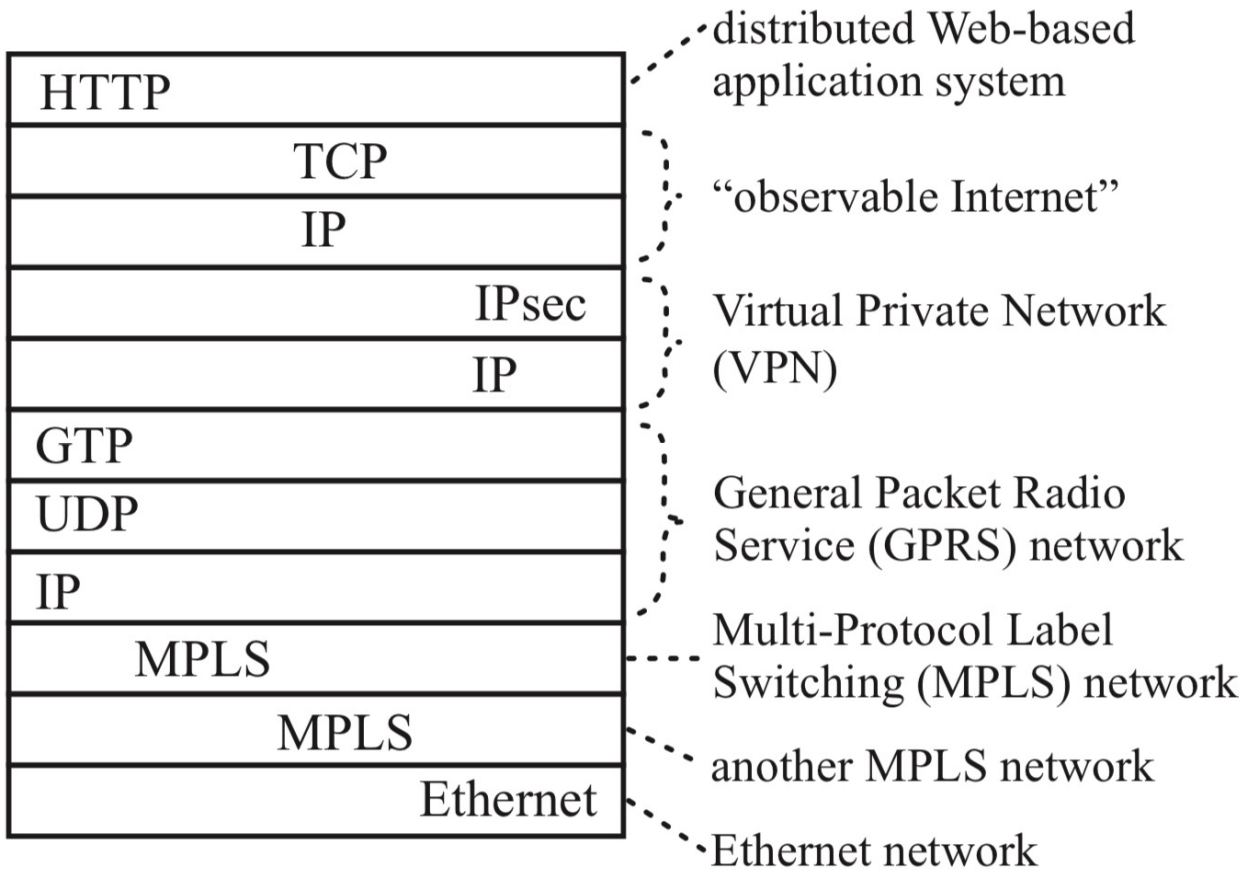
Department of Informatics
Networks and Distributed Systems (ND) group

IN 3230 / IN 4230

Conclusion / Summary lecture



This is where we started



Typical packet from AT&T backbone network

Pamela Zave and Jennifer Rexford. 2019. The compositional architecture of the internet. Commun. ACM 62, 3 (February 2019), 78-87. DOI: https://doi.org/10.1145/3226588

You have learned about...

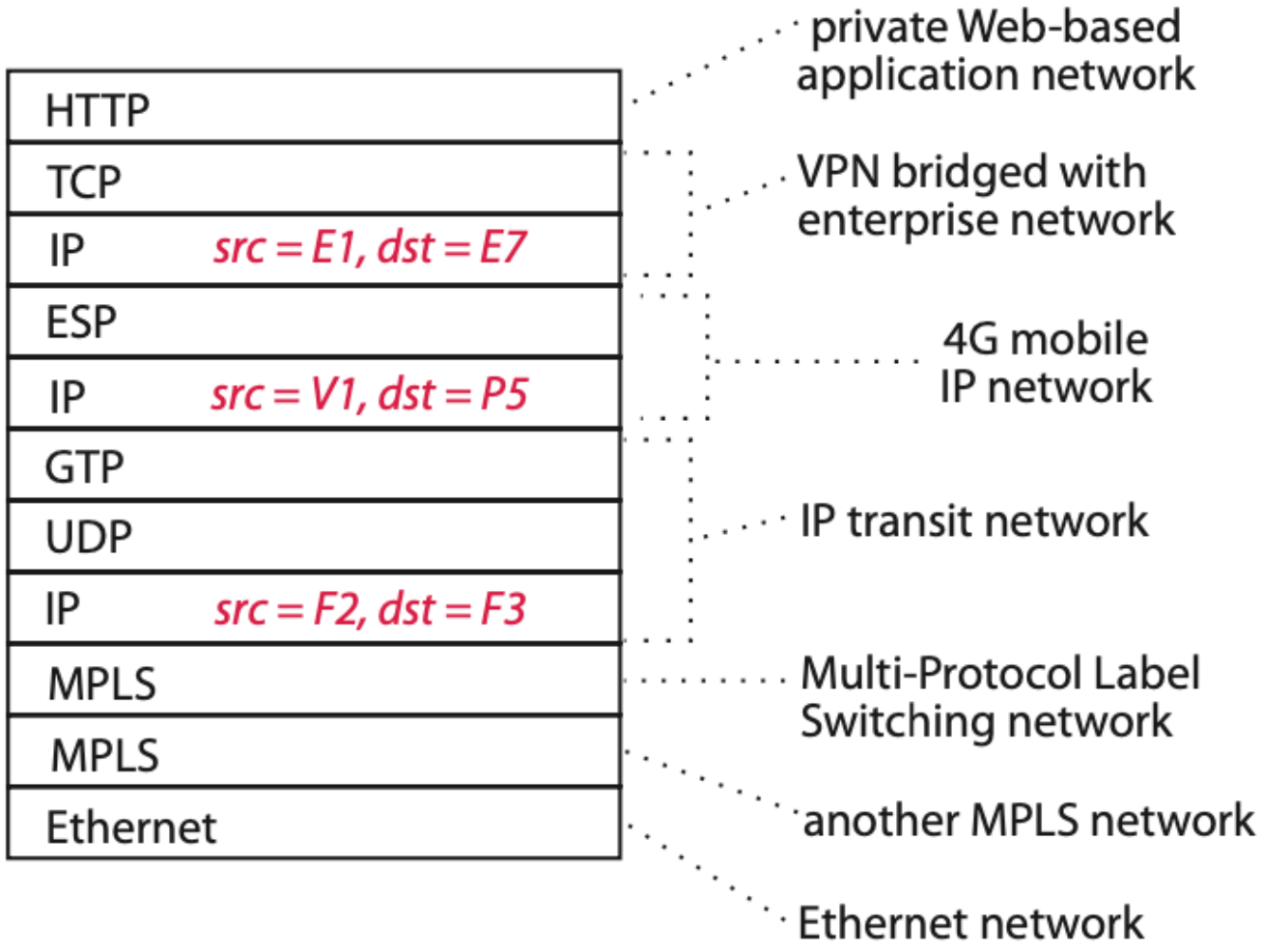
Among other things:

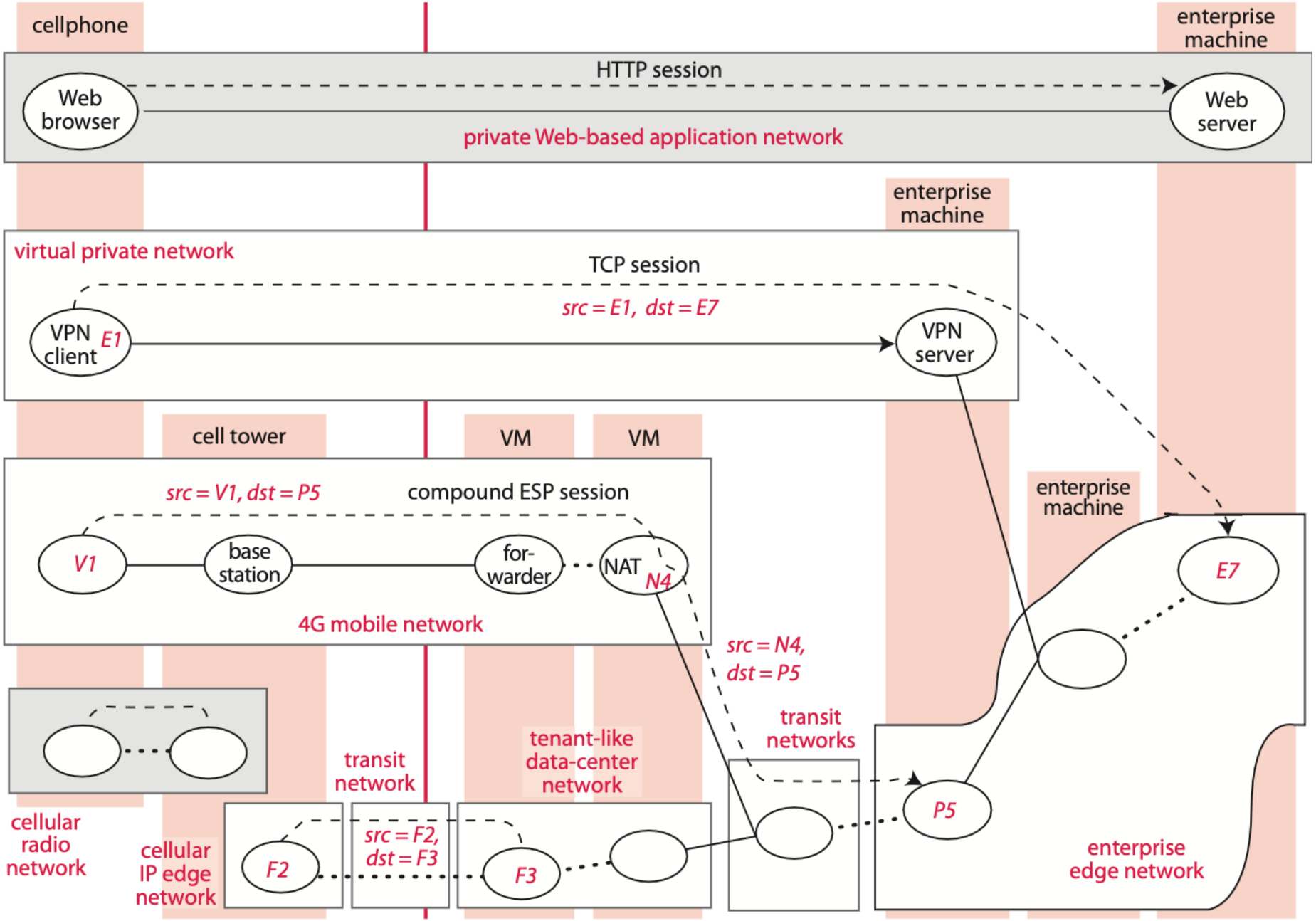
- TCP
- Cellular networks (where GTP is used for tunneling)
- MPLS (and VPNs based upon it)
- Data centers

... so now, we can show you...

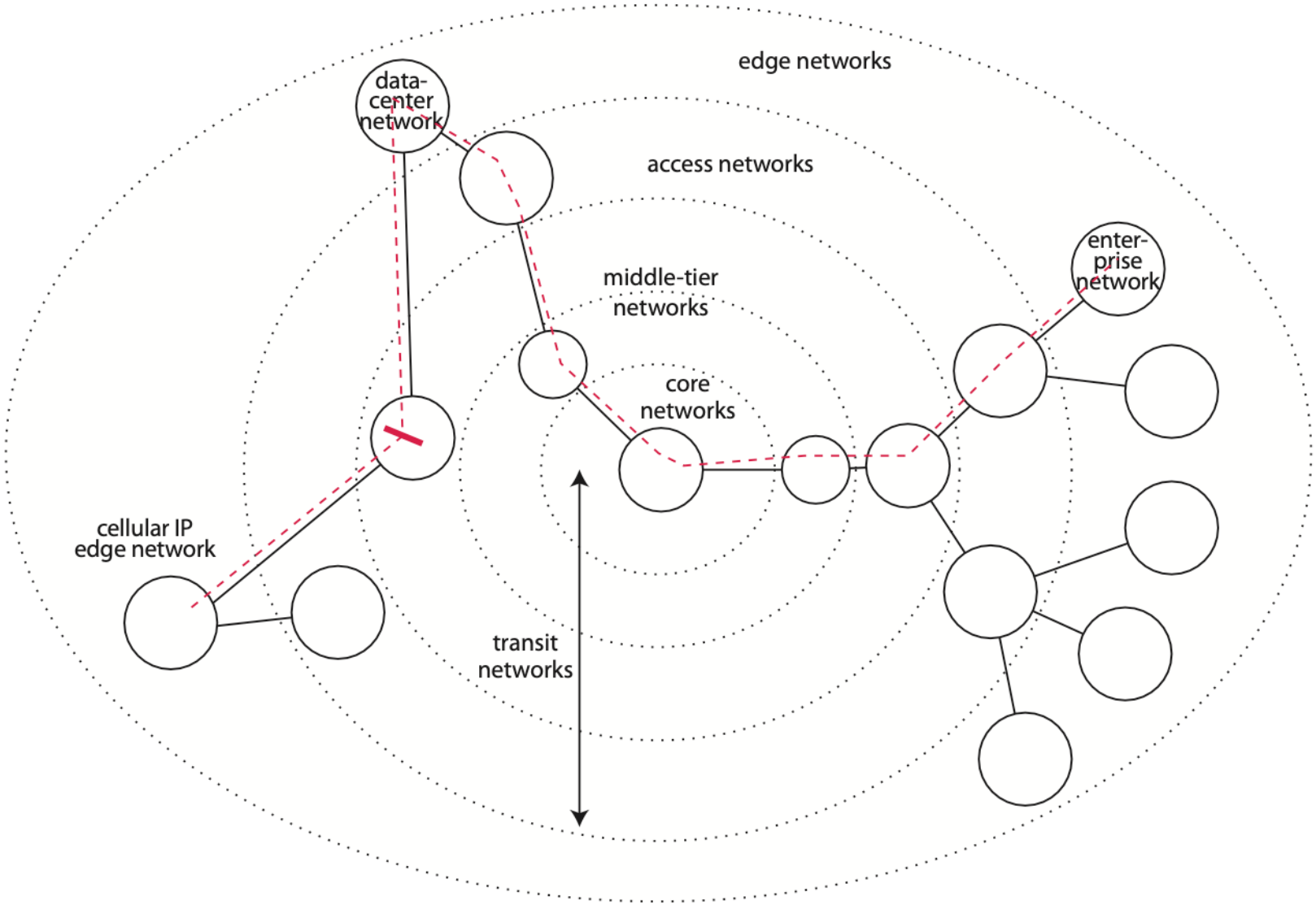
From this book: "Real Internet Architecture: Past, Present, and Future Evolution" by Pamela Zave & Jennifer Rexford, Princeton University Press, 2024, ISBN 9780691255804

The packet again, but with addresses




cellphone
enterprise machine
HTTP session
Web browser
Web server
private Web-based application network
enterprise machine
virtual private network
TCP session
src = E1, dst = E7
VPN client E1
VPN server
cell tower
VM
VM
src = V1, dst = P5
compound ESP session
V1
base station
for-warder
NAT N4
4G mobile network
enterprise machine
E7
src = N4, dst = P5
transit networks
tenant-like data-center network
transit network
P5
cellular radio network
cellular IP edge network
F2
src = F2, dst = F3
F3
enterprise edge network

The Internet path of this packet



Thank you!