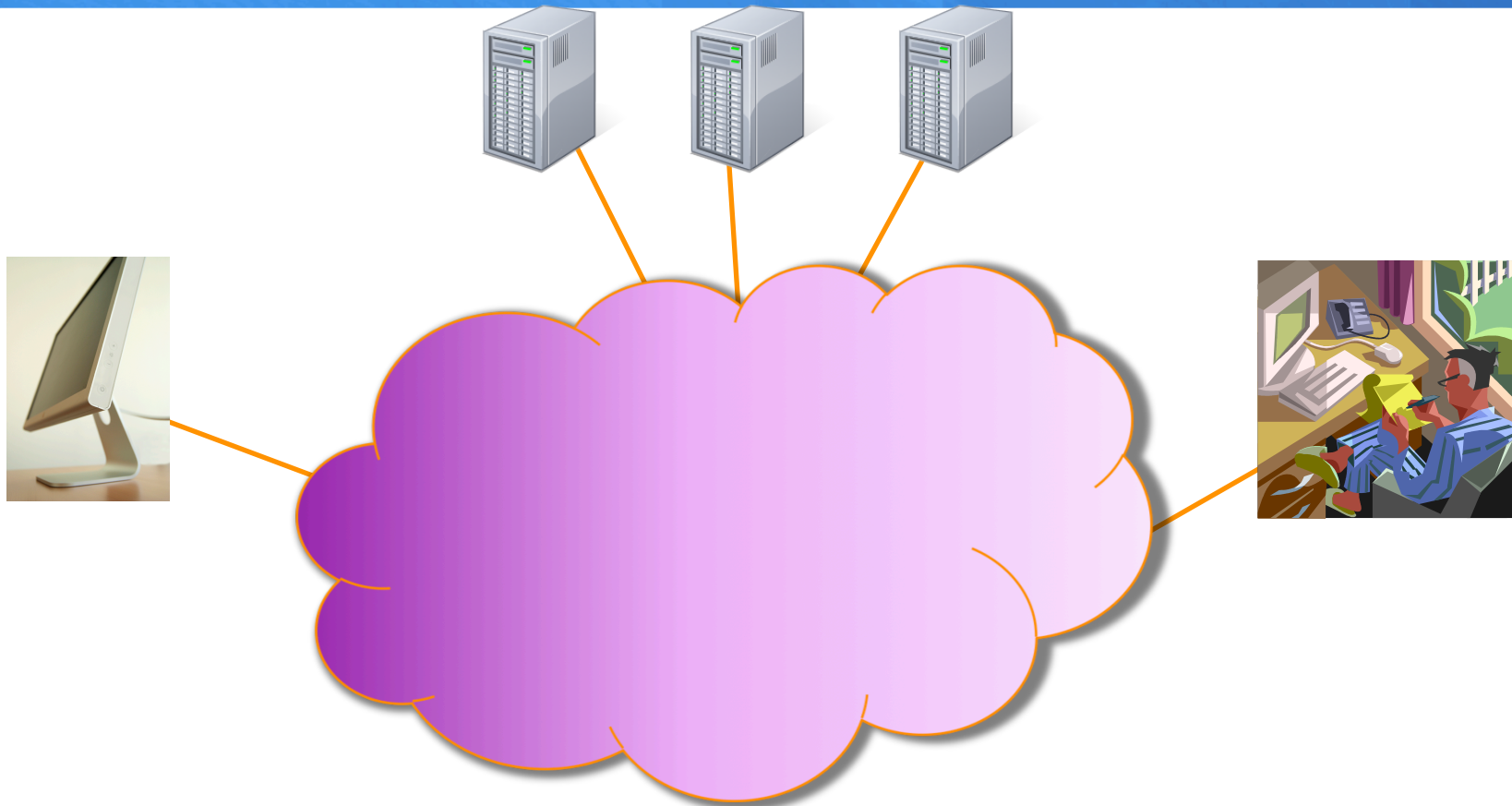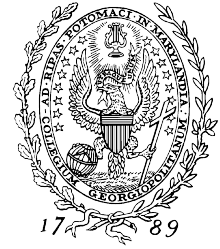# Network Traffic Management:
A Delicate Balance

US Telecom Webinar
Dr. Eric W. Burger
Georgetown University

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Disclaimer – I Am Not Speaking On Behalf Of:
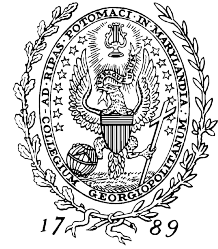
+ USTelecom (Invited Guest)

+ Georgetown University (Faculty)

+ Internet Society (Trustee)

+ Internet Engineering Task Force (Trustee)

+ IEEE/IEEE-USA
  (Past Chair, Committee on Communications Policy)
  (Chair, Joint CCP/Intellectual Property Committee Work Group on IPR and Piracy)

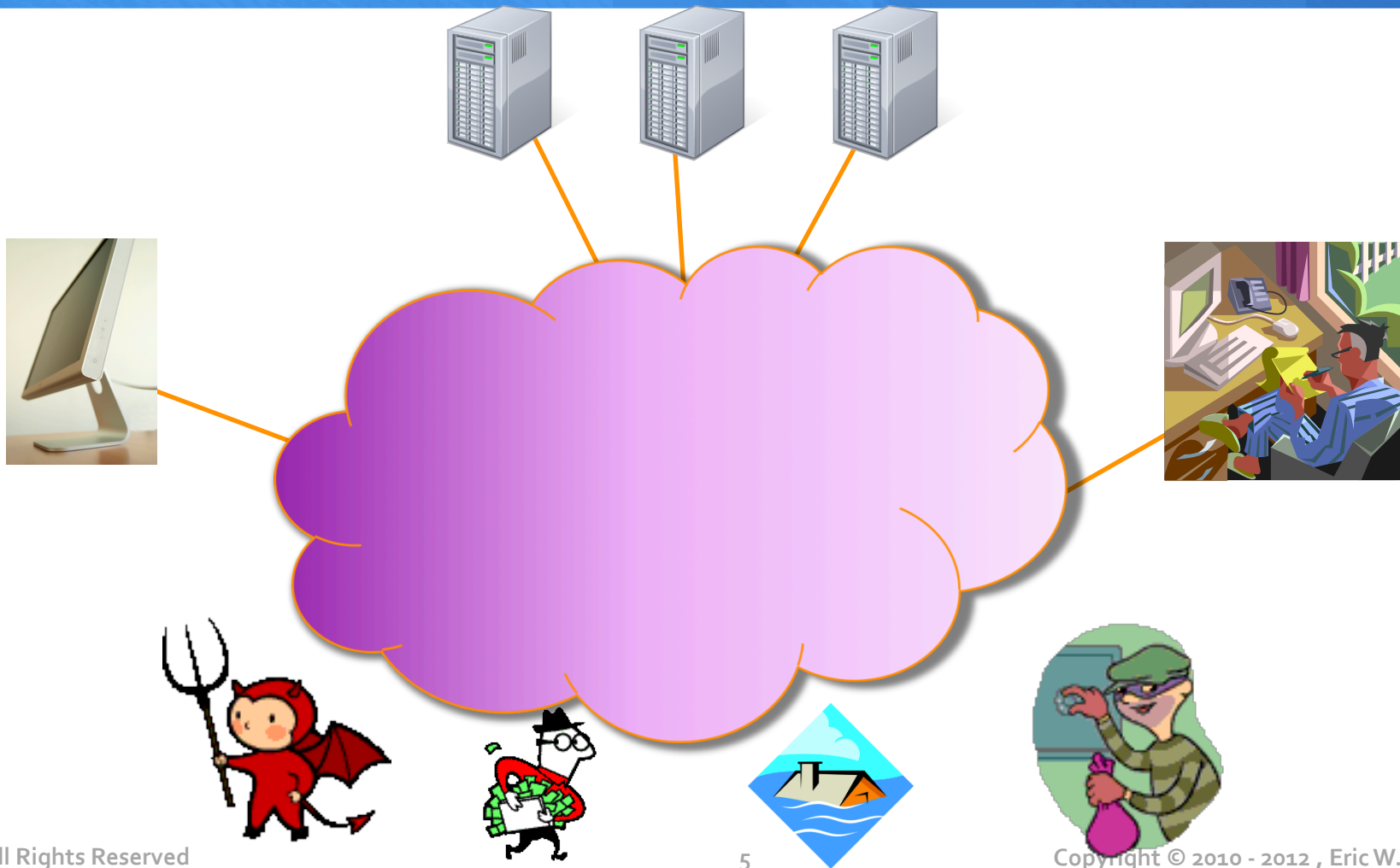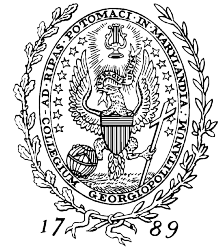+ SIP Forum (Chairman Emeritus)

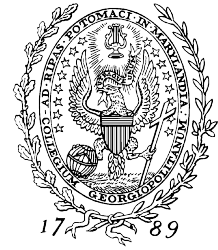+ ICANN/PIR/or other I* organizations

Why Network Traffic Management?

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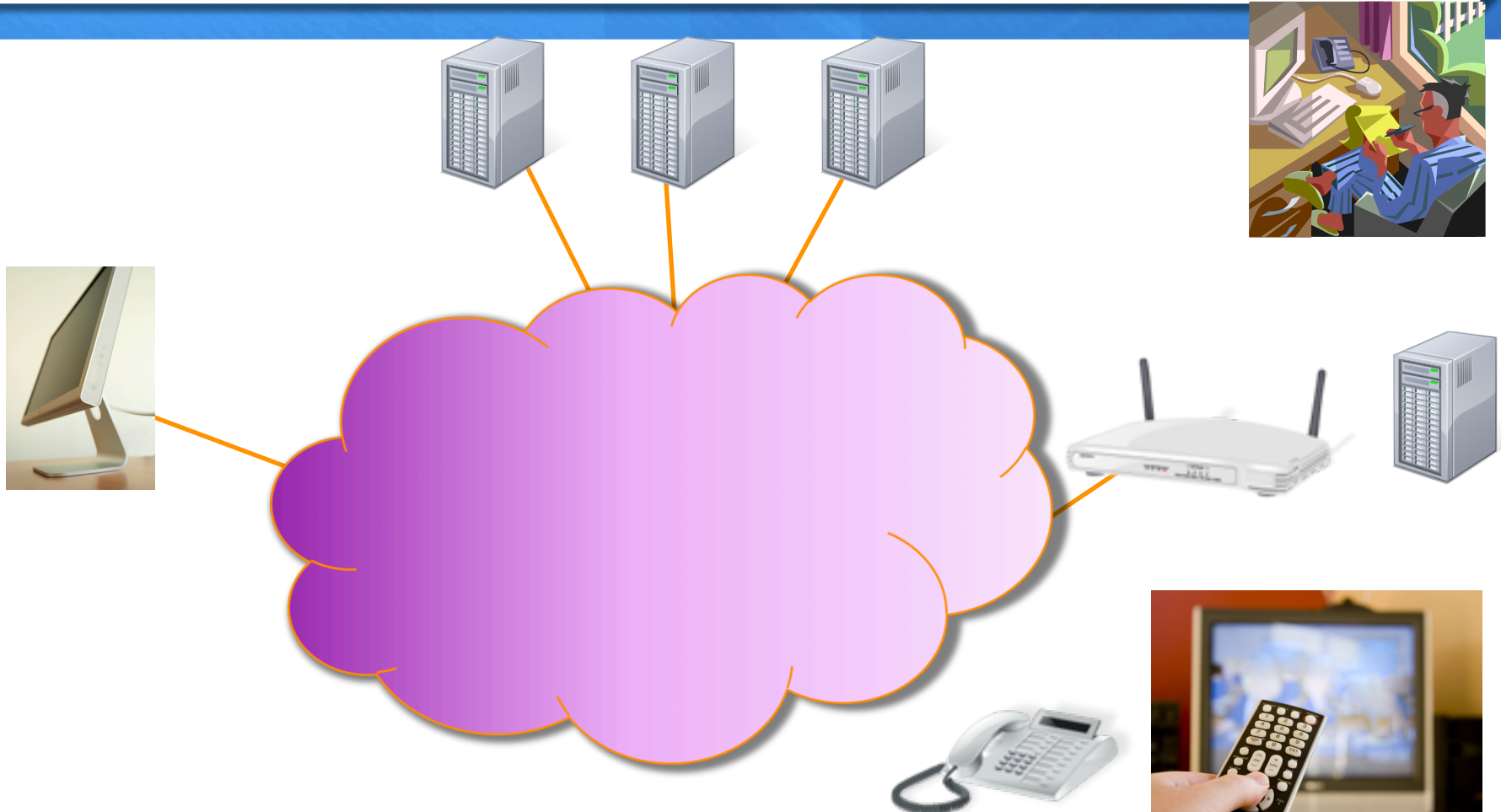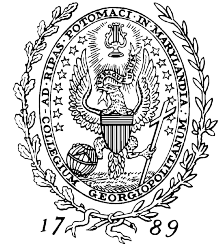
Why Network Traffic Management?

Stakeholders

Network Access & Transport Providers

Content & Application Providers

Content & Application Users

Legislators

Regulators

What Drives Network Traffic Management?

IEEE-USA NTM Principles

Competitive Providers

Minimal Regulation

Nondiscrimination

Service Levels

Transparency

Metrics

IEEE-USA NTM Principles
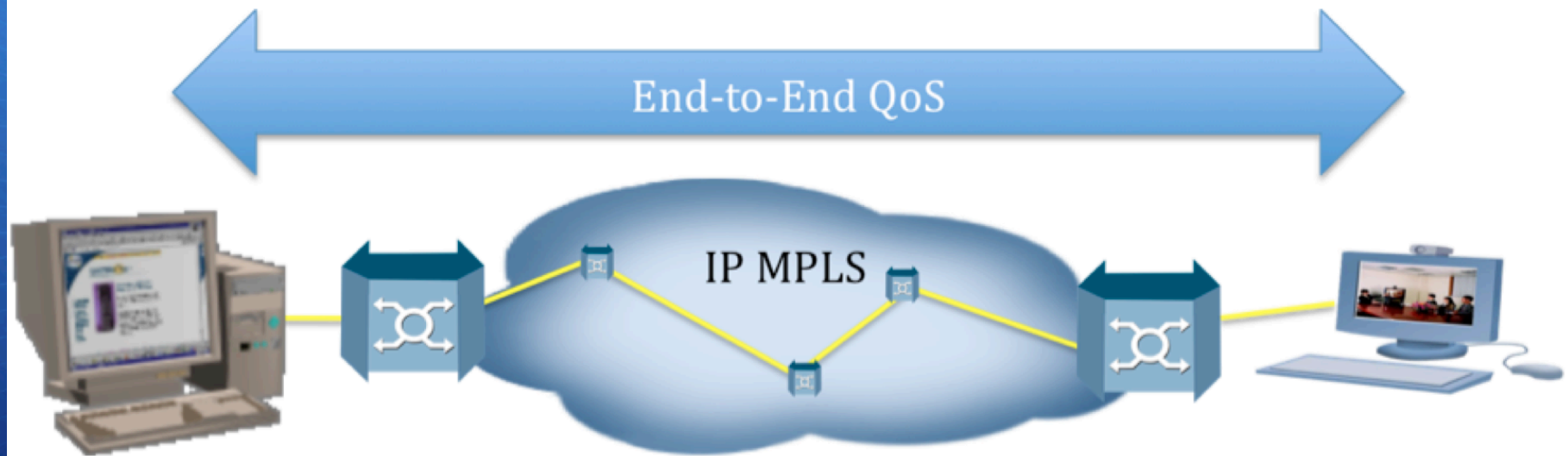
Competitive Providers

Minimal Regulation
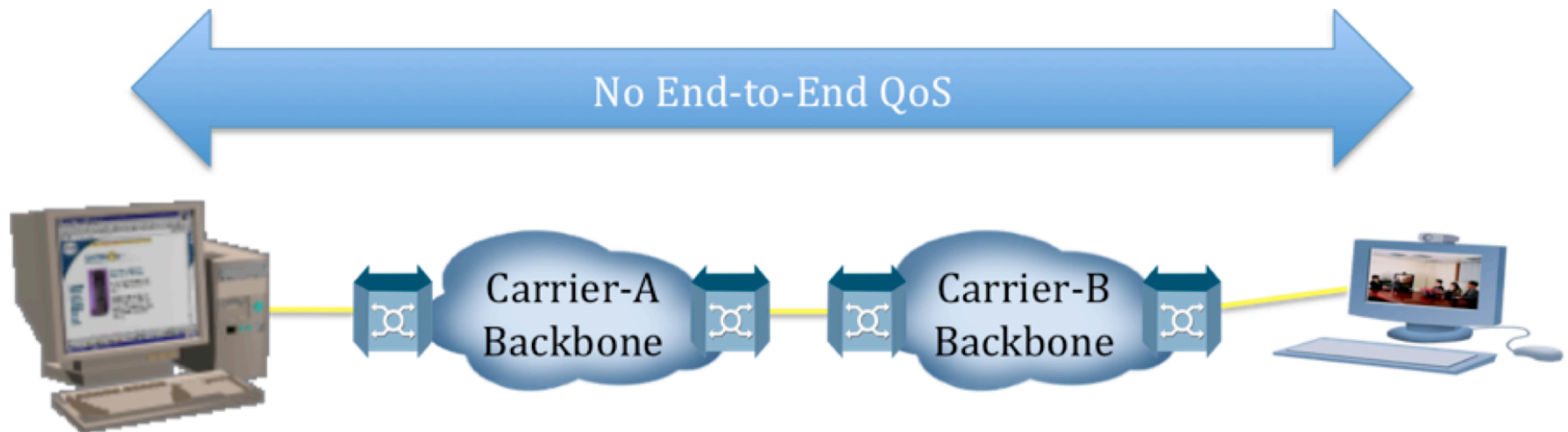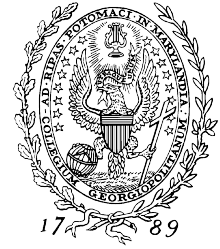
Nondiscrimination

Service Levels

Transparency

Metrics

Traffic Management is Difficult in a Network

End-to-End QoS

IP MPLS

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Traffic Management Today is Not Possible Across Networks

No End-to-End QoS

Carrier-A Backbone

Carrier-B Backbone

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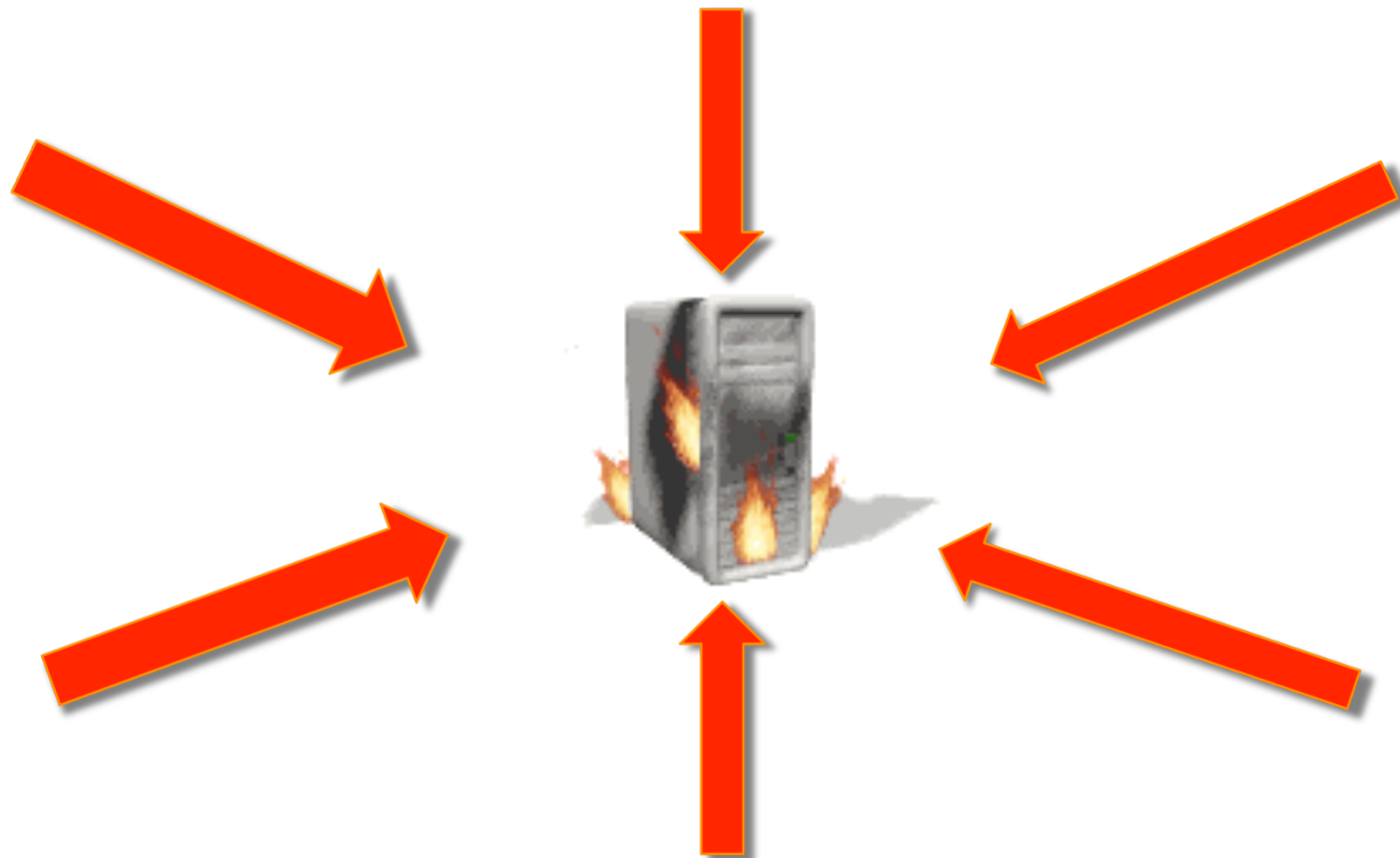# Network Traffic Management and Network Neutrality

Hands off?
Really?

If DNS is under attack…
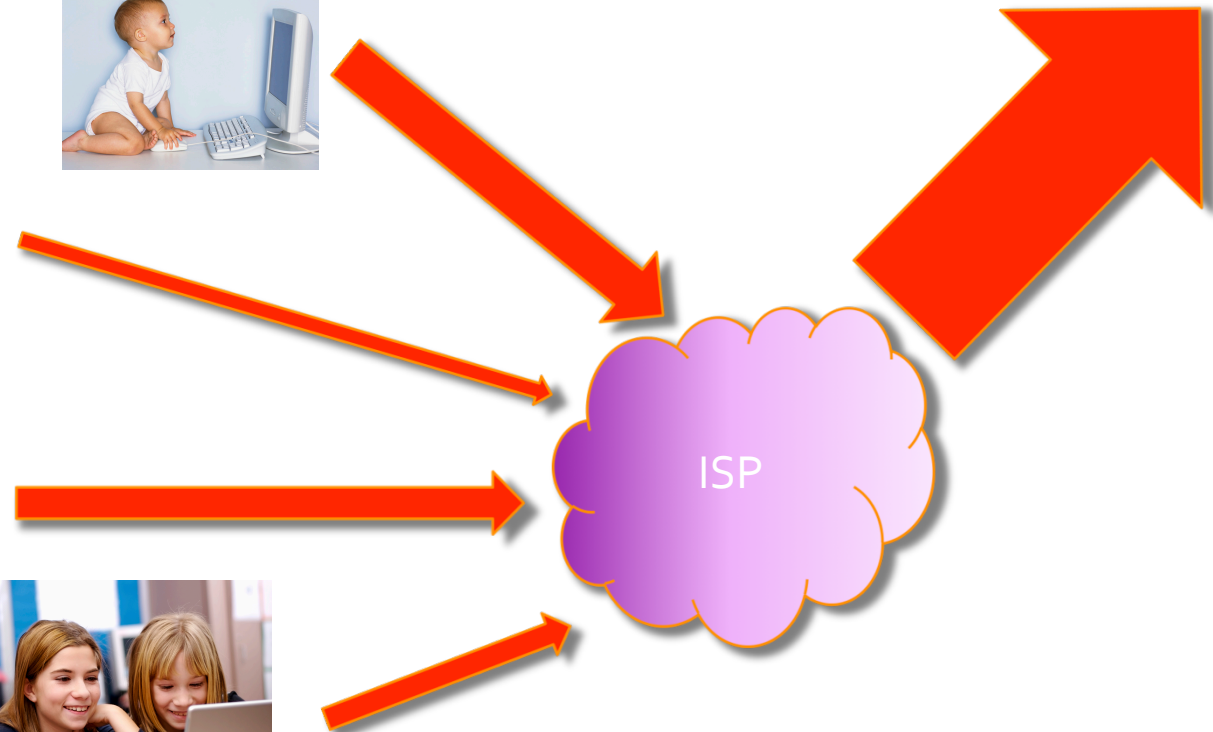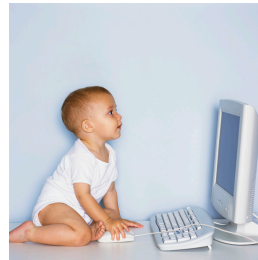# Is it OK to squelch attack?
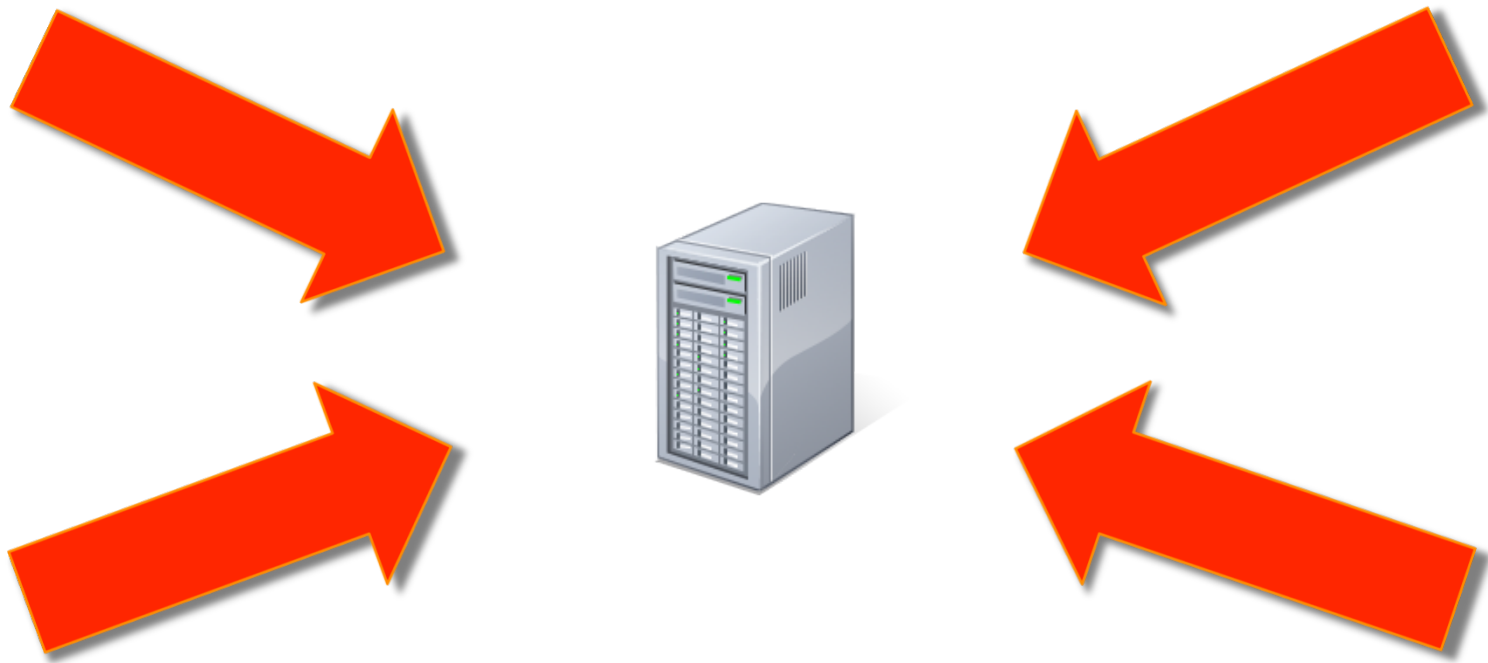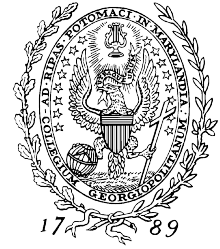
If an enterprise is under attack?...
OK to squelch attack?

If ISP is source of botnet…
OK to squelch attack?

Users hate spam… OK to filter spam at ISP?

+ Good for users – need 1/10th BW otherwise

+ Good for ISP – need 1/10th less transit BW

+ Spam vs. commercial speech

+ Commercial speech vs. free speech

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Botched Traffic Management

Comcast

2007

Not Looking Good Traffic Management

AT&T

2012

Evil Traffic Management

Madison River
2005

What Can You Do?
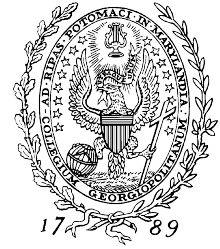
Participate in IEEE-USA

- http://www.ieeeusa.org

Participate in IETF

- http://www.ietf.org

Dr. Eric W. Burger

eburger@standardstrack.com

http://www.standardstrack.com

http://www.secomcom.org

Thank You

IEEE Network Traffic Management White Paper
http://www.ieeeusa.org/volunteers/committees/ccp/docs/NTM-whitepaper.pdf