Protection of services on the Internet, specifically web services

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My background...

- Working with DNS and Internet since 1987

- Active in IETF since 1992, in the leadership for 8 years

- Author of standards like ENUM and Internationalized Domain Name

- Member of the board, Internet Society

- Member of UN IGF AG since 2006

- Employed by Cisco since 2000

- Appointed advisor to Swedish Government since 2003

But also...

- Have concentrated on building robust services, and run services during crisis

- Responsible for distribution of election results in Sweden 1993-2000

- Involved directly in large scale disasters and Incidents like Tsunami in Pacific Ocean, Tornado in Sweden and IT Attack against Estonia

Conclusions

- Everyone must take take care of their piece of The Internet - ***Shared Responsibility***

- Security is to a larger degree ***Robustness*** than what people think in general

- Many are surprised over the existing ***Dependencies***

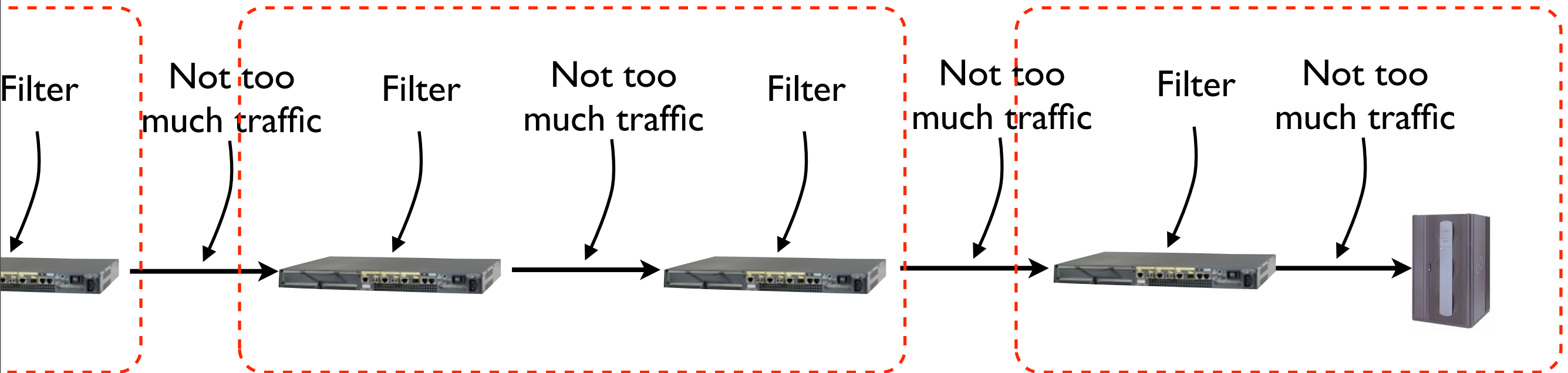- In PPP, role of government is to **Coordinate**, and be a ***Good User***

We can not blame anyone anymore

- Historically, everyone could point at "The Telco" to be responsible for communication services

- Today, we have **shared responsibility**

- We know this works!

- Question is instead *how to coordinate?*

  - Before, during and after an incident

My piece of the Internet?

- When a person or organisation connect to "the Internet", the network and services provided end up being **_a piece of the Internet_**

- Protection (and robustness) start at home

- You have a lock on your door, and do not ask road authorities to keep burglars out!

Start at home?

Filter

Not too much traffic

Filter

Not too much traffic

Filter

Not too much traffic

Filter

Not too much traffic

Electricity? Ducts? Fiber? Telephone poles?

Coordination not only "horisontal"

Dependencies lead to need for coordination

- Restoration of electricity network require working cellphone network

- Cellphone network require electricity

- Electricity require diesel or working distribution network

➡ Coordination needed between electricity-, telco- and petrol distribution companies

Web based services

- "Normal Internet Traffic"

  - Connectivity must work (like roads)

- Provide good service

  - Robustness (keep service running)

  - Secure the service (correctness)

- Consumers must not be fooled

  - Service should work (responsiveness)

  - Trust service (security and correctness)

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Conclusions

- *Shared Responsibility*

- *Robustness*

- *Dependencies*

- *Gov. in Coordinating Role*

- *Public Sector Be a Good User*