

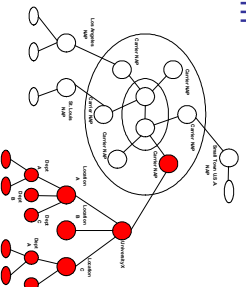
# Internet Worm and Virus Protection with Extensible Networks



John W. Lockwood: [lockwood@arl.wustl.edu](mailto:lockwood@arl.wustl.edu), and the ARL Reconfigurable Networking Hardware Group: <http://www.arl.wustl.edu/arl/projects/fpx/reconfig.htm>

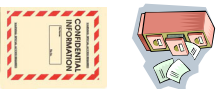
## The Problem

- Computer virus infections are spreading
- New virus spread quickly through email, web, and peer-to-peer tools
- Confidential Data is leaking through networks
- Government secrets, personal data, and corporate information are stolen
- Internet infrastructure is at risk



## Who Cares ?

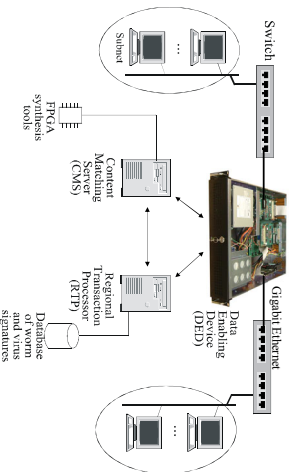
- Who cares about computer virus infections ?
  - People that own a business with a network
  - Organizations that use the Internet
- Who cares about confidential data leaks ?
  - Governments with classified secrets
  - Corporations with proprietary information



## How can networks be made safe ?

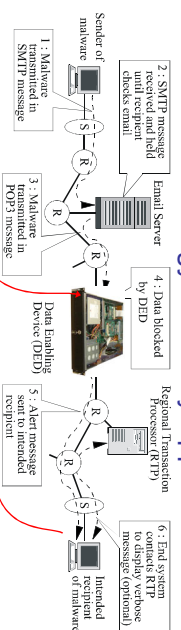
A device has been developed at Washington University that:

- Identifies & acts on content in Internet packets at high speed (Gigabits/second) without delay (real-time)
- Scans and blocks network traffic using reconfigurable hardware at speeds up to 100x faster than could be done in software
- Utilizes technology is compatible with Local and wide-area networks (Internet Protocol)

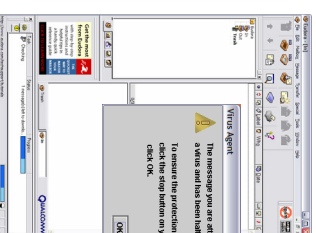


## How it works: An automated design flow builds FPGA hardware that is dynamically deployed to scan and block malicious network content

## Technology has Many Applications



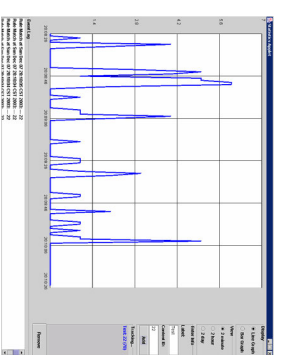
System has been tested with live traffic



Alerts sent to end users & network administrators



Intelligent gateways are easily deployed



## Commercialization

Global Velocity, located in St. Louis MO, has an exclusive license to the high-speed network content scanning technology. They are actively commercializing the technology. Markets include governmental agencies, universities, and corporations for network infrastructure protection and intelligence applications.

<http://www.globalvelocity.info/>