



RE-IMPLEMENTATION AND CUDA ACCELERATION OF THE INETVIS VISUALISATION TOOL

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Where leaders learn

PRESENTATION OUTLINE

1. InetVis Tool

- What is it?
- How does it work?
- Issues to be addressed

2. Re-implementation

- C++ to C#

3. Graphical Enhancement

- OpenGL in C#?
 - OpenTK
- Interface Overlay

4. Enhancements

- CUDA Integration
 - GPGPU advantages
 - CUDA.Net
- 3-D space traversal using Joystick input

1. INETVIS TOOL OVERVIEW

What is it?

- 3-D **Visualisation** Tool
- Represent Data-sets
- Monitor real-time network traffic

How does it work?

- Capture Packets
- Plot in 3-D space

Issues to be addresses

- Traffic **volume**
- Usefulness of visualisation
- Information output

2. RE-IMPLEMENTATION

- **C# is friendly!**

- Automatic garbage collection in C#
- Delegate types in place of pointers



- C# is well supported
- Wrappers available
- XNA capabilities
- CUDA support
- SharpPCap
- GUI based tool
- Plug-ins



3. GRAPHICAL ENHANCEMENT

OpenGL

- InetVis written with OpenGL functionality
- XNA?
- Wrapper class for C#?
- **OpenTK**

Interface Overlay

- Technology Advancements
- **Information** Overlay
- Security Metrics
- Network Analysis

4. EXTENSIONS

CUDA Integration

- GPGPU advantages
- Parallelism
- C# support?
- **CUDA.Net**

3-D space traversal using Joystick input

- 3-D environment
- OpenGL support for Joystick IO?
- Data-set **volume**

THE END



QUESTIONS?

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