OSTINATO

An open, scalable packet/traffic generator

Srivats P.

Agenda

What – Who?

Existing Solutions

Advantage Ostinato

Supported OS

Architecture

Deployment Options

Typical Usage

Feature Tour

History and Current Status

Contributing

What - Who?

What is it for?

- Networking Protocol Development and Analysis
  - Functional Testing
  - Performance Testing
- Security Testing
  - Penetration Testing

Who is it for?

- Programmers/Developers
- QA Testers
- Security Researchers

Existing Solutions

Low-End	Medium-End	High-End
Freeware	**Open Source**	**Commercial**
Colasoft Get to Know Your Network reliable tool for reliable tests PACKETBUILDER.NET	Scapy hping Yersinia packETH	IXIA SPIRENT Communications
➔PC ➔Win Only ➔Simplistic ➔Crippled ➔Don't scale	➔Cross Platform ➔CLI (mostly) ➔Limited Protocols ➔Limited Controls ➔Narrow Focus ➔No Controlled Environment	➔Fully Featured ➔Dedicated H/W ➔Expensive => Insufficient ➔Overkill

Advantage Ostinato

Scales from low-end to high-end use cases

Viable Alternative to Commercial Tools

Cost Savings

Productivity Improvement

Facilitates new Testing Scenarios

Frees up ports for where they are really needed

Supported OS

Windows

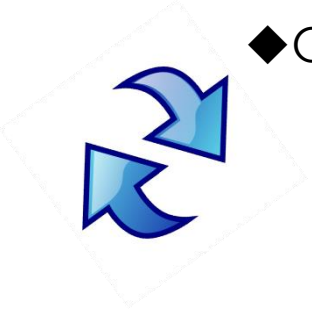
Linux

Mac OS X

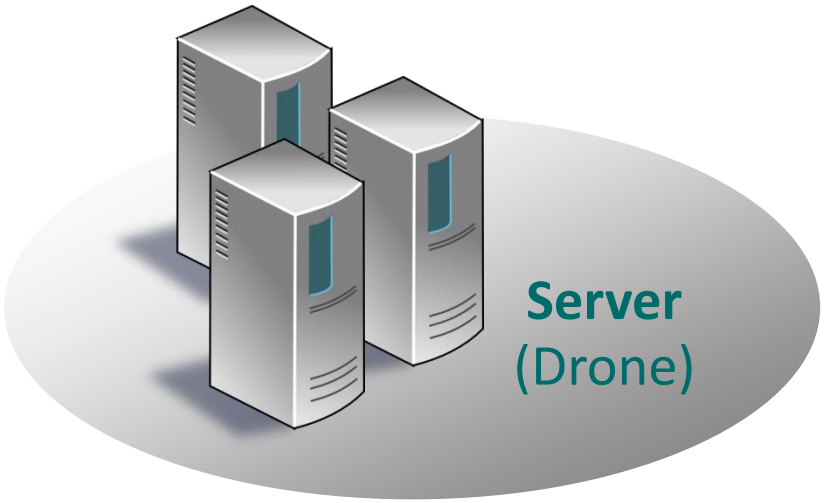
BSD

Architecture

- GUI
  - Configuration
  - Control
  - Results



- Open Protocol



- Packet Generation
- Packet Capture
- Statistics

Deployment Options

PC Application

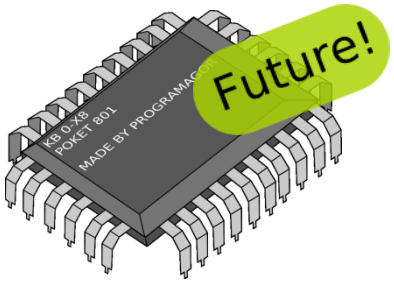
- PC runs both client and server applications

Live CD/USB

- Convert any PC to a dedicated traffic generator

DD-WRT opkg

- Package Drone (server) for DD-WRT



Repurpose Custom Hardware

- Port Drone (server) for custom hardware

Ostinato Hardware

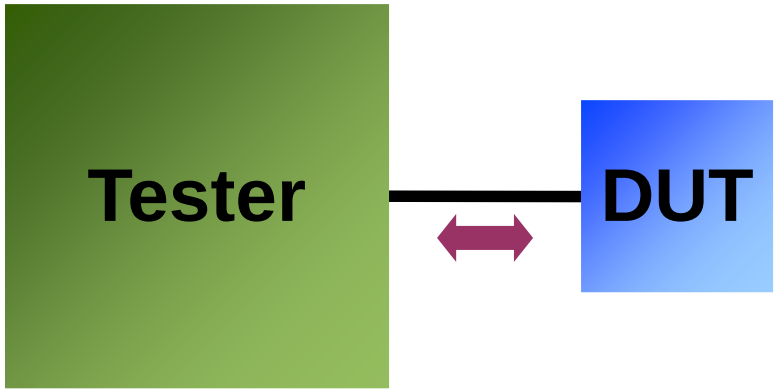
- Ostinato hardware running Drone (server)

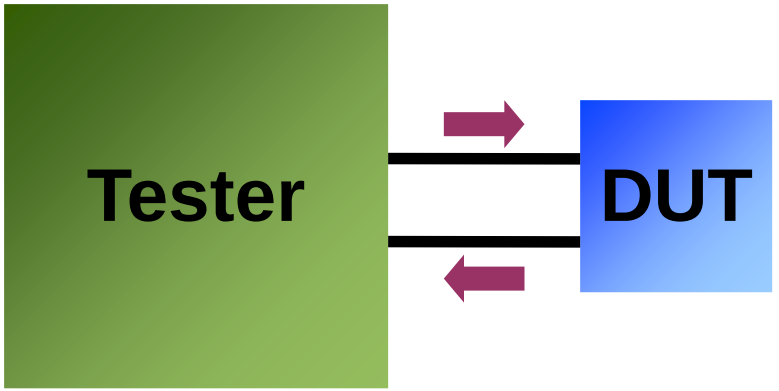
Late Breaking News …

OSTINATO + napatech

= 20 Gbps !

Typical Usage





Statistics

	Port 0-0 *	**Port 0-1 ***	Port 0-2 *
Link State	Unknown	Unknown	Down
Transmit State	Off	Off	Off
Capture State	Off	Off	Off
Frames Received	0	2258	
Frames Sent	0	2258	
Frame Send Rate (fps)	0	0	
Frame Receive Rate (fps)	0	0	
Bytes Received	0	135480	
Bytes Sent	0	135480	
Byte Send Rate (Bps)	0	0	
Byte Receive Rate (Bps)	0	0	

Statistics

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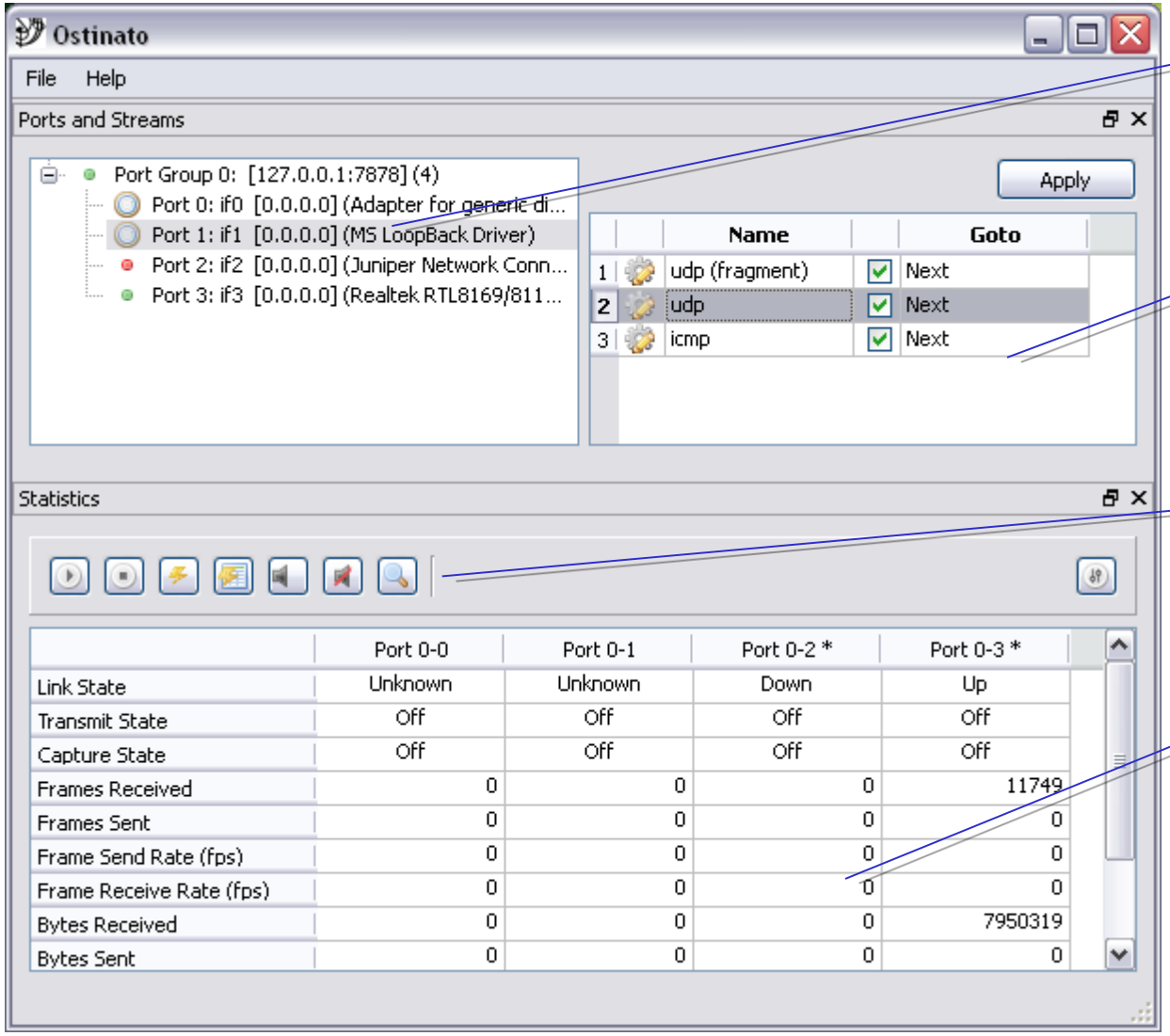
Feature Tour (Layout)



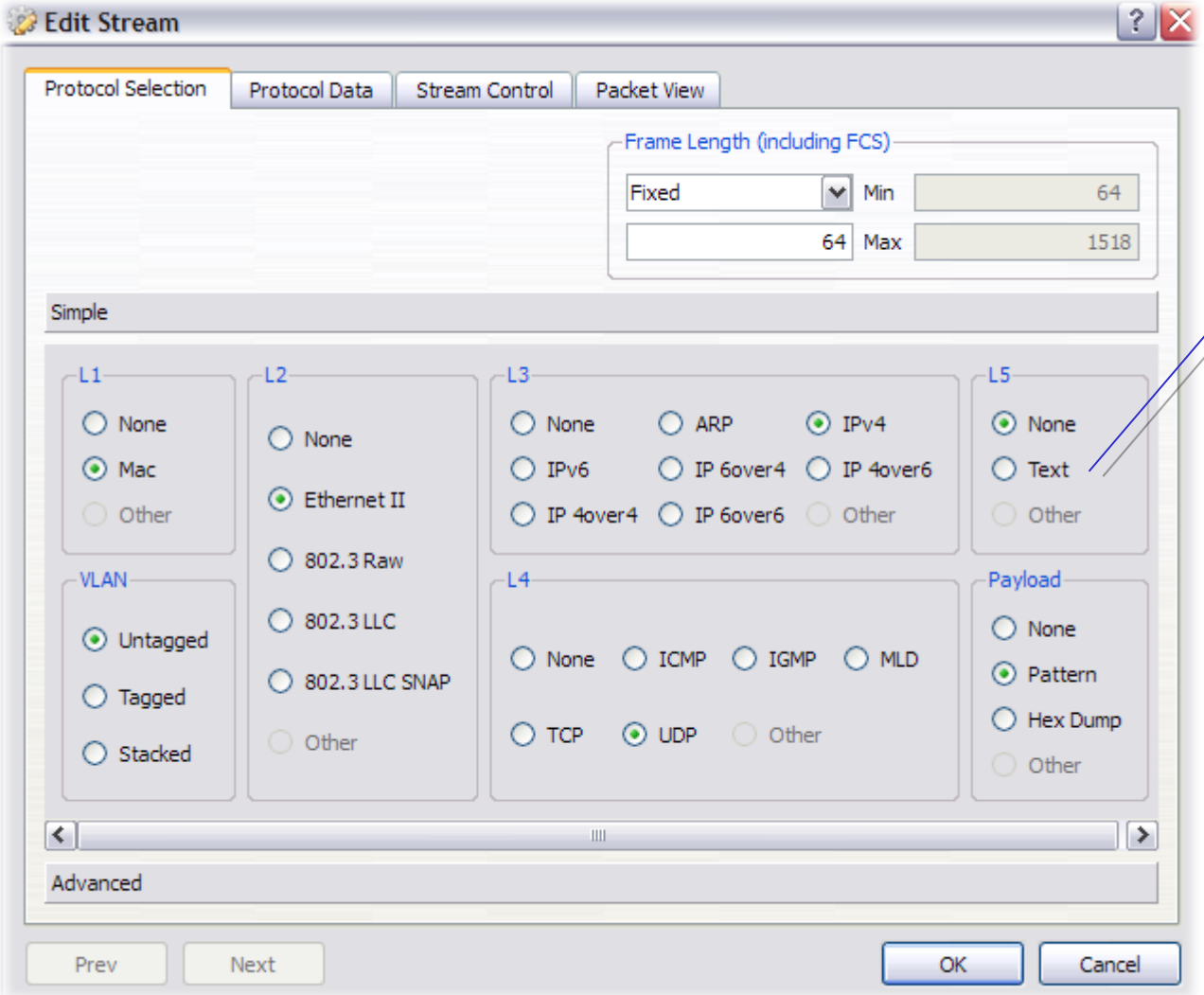
Ports

Streams

Controls

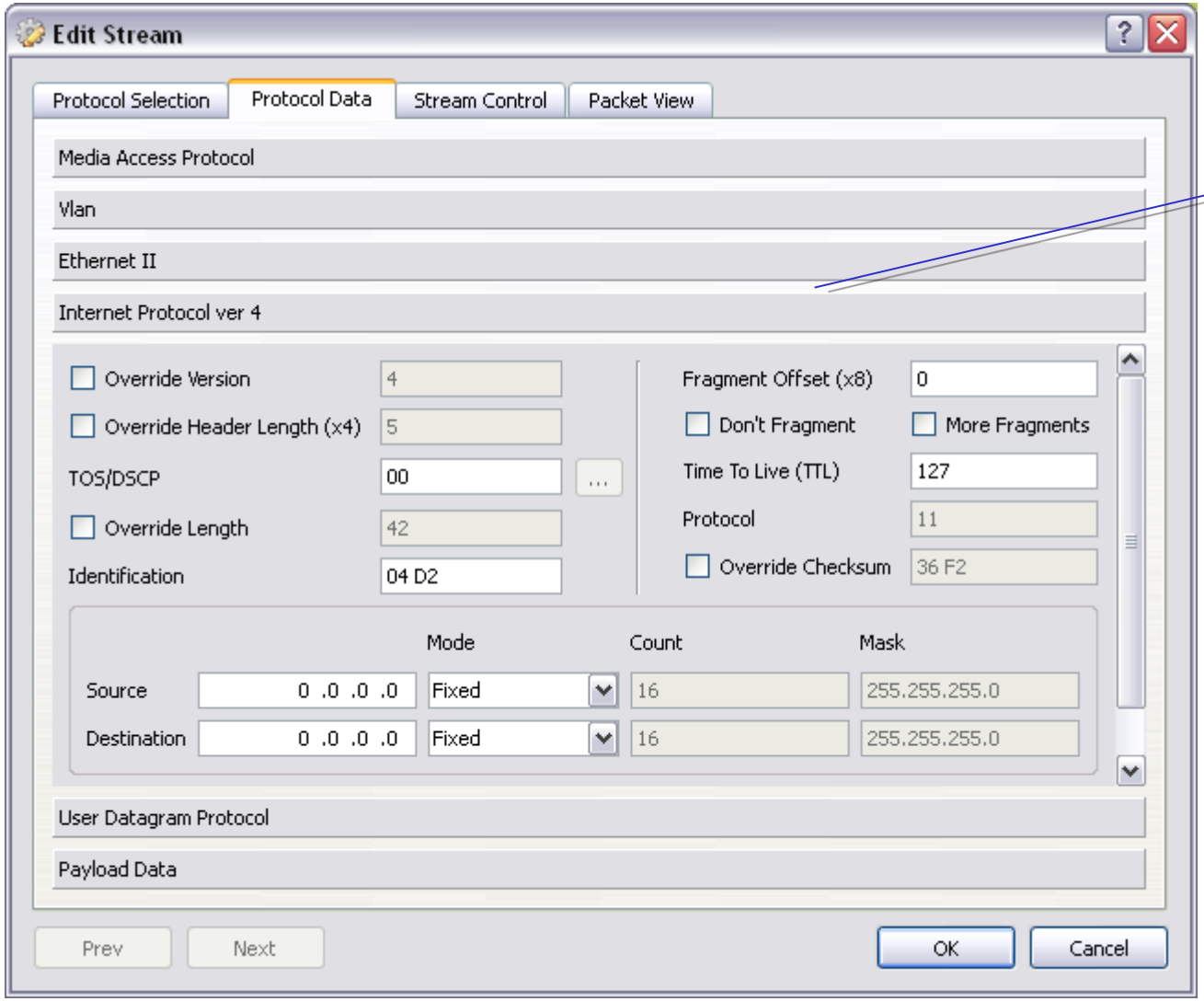
Statistics

Feature Tour (Protocols)



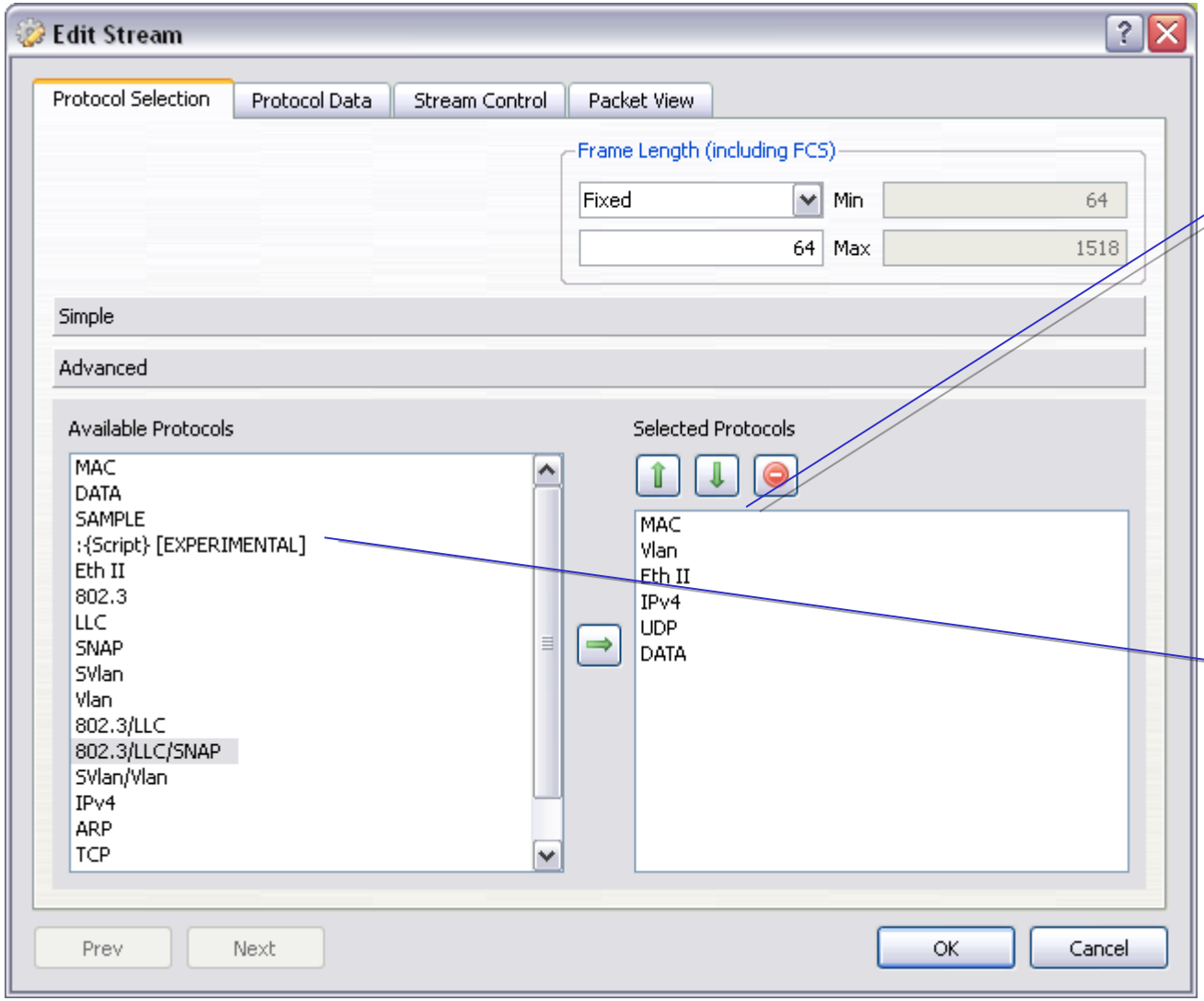
Any text based Protocol e.g. SIP, HTTP, RTSP, NNTP etc.

Feature Tour (Protocols)



Modify
ANY field
of ANY protocol

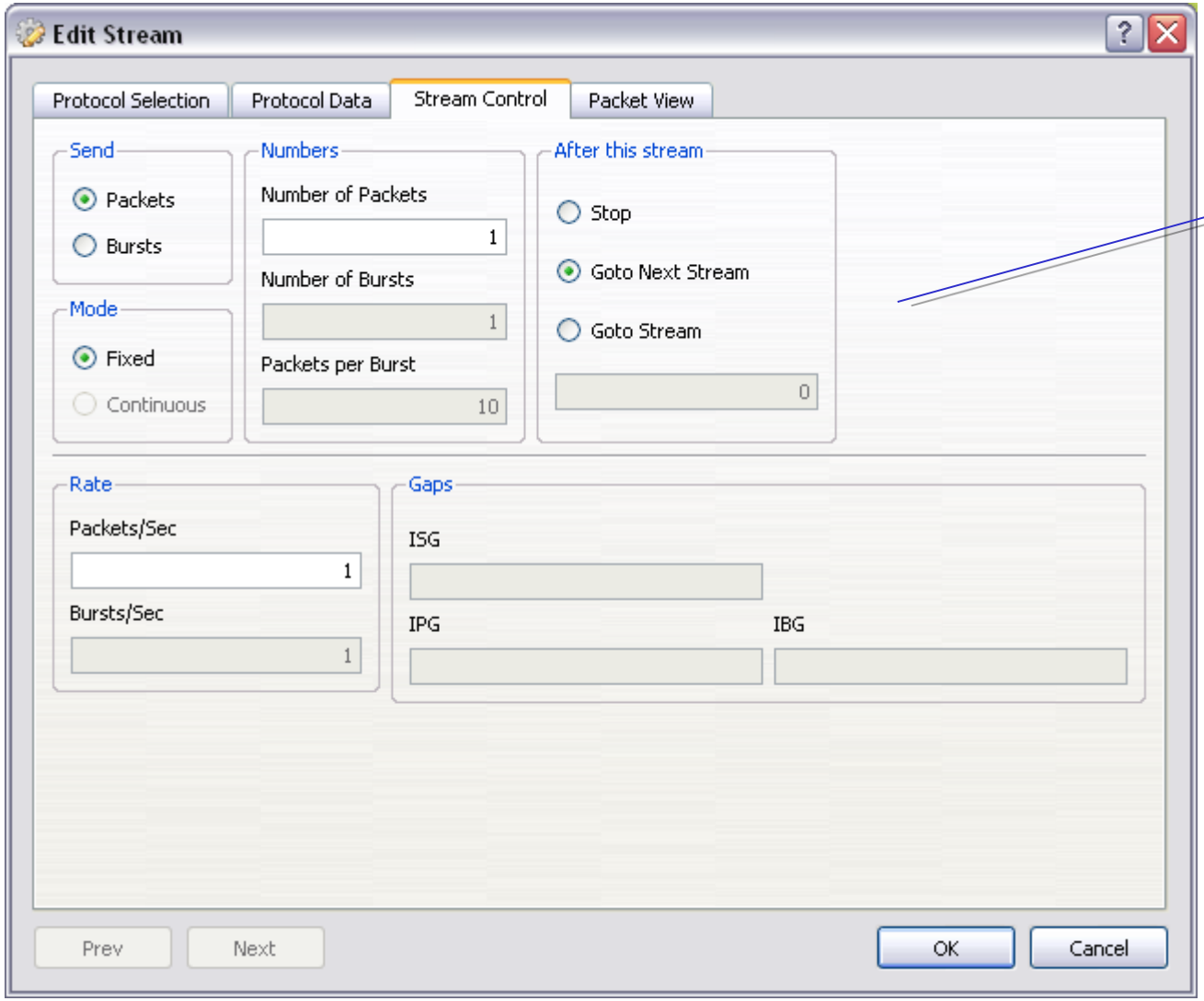
Feature Tour (Advanced Protocols)



Stack protocols in arbitrary order

Userscript Protocol (EXPERIMENTAL)

Feature Tour (Stream Controls)



Rates
Packets
Bursts
Order

History and Current Status

2007 – Started Hacking

Apr 2010 – First public release 0.1

Nov 2010 – Latest release 0.3

Contributing

Spreading the word – blog, social media etc.

Packagers/Maintainers

Testing/QA

Programming

- C++
- Qt Toolkit
- Protocol Buffers
- LibPcap/WinPcap
- Mercurial (Hg)

More Info

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That's all folks!

Questions?

What does Ostinato mean?