Multicast Monitoring

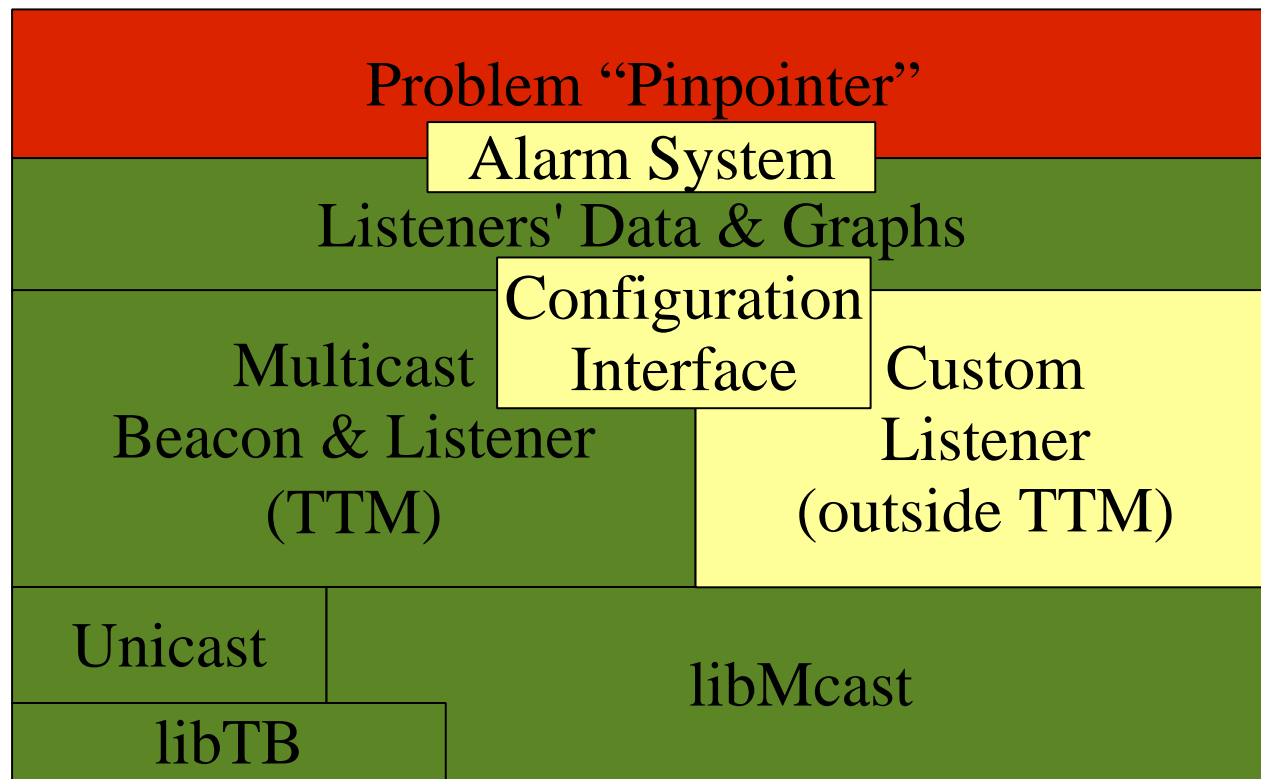## *Progress and Outlook*

Overview (I)

- ## Multicast Monitoring on RIPE NCC Test Traffic Boxes

  - by Gert Doering, April 2006

- ## Policy suggests

  - Multicast beacons

  - Multicast listeners

  - Raw data for interested parties

  - Pinpointing of problems

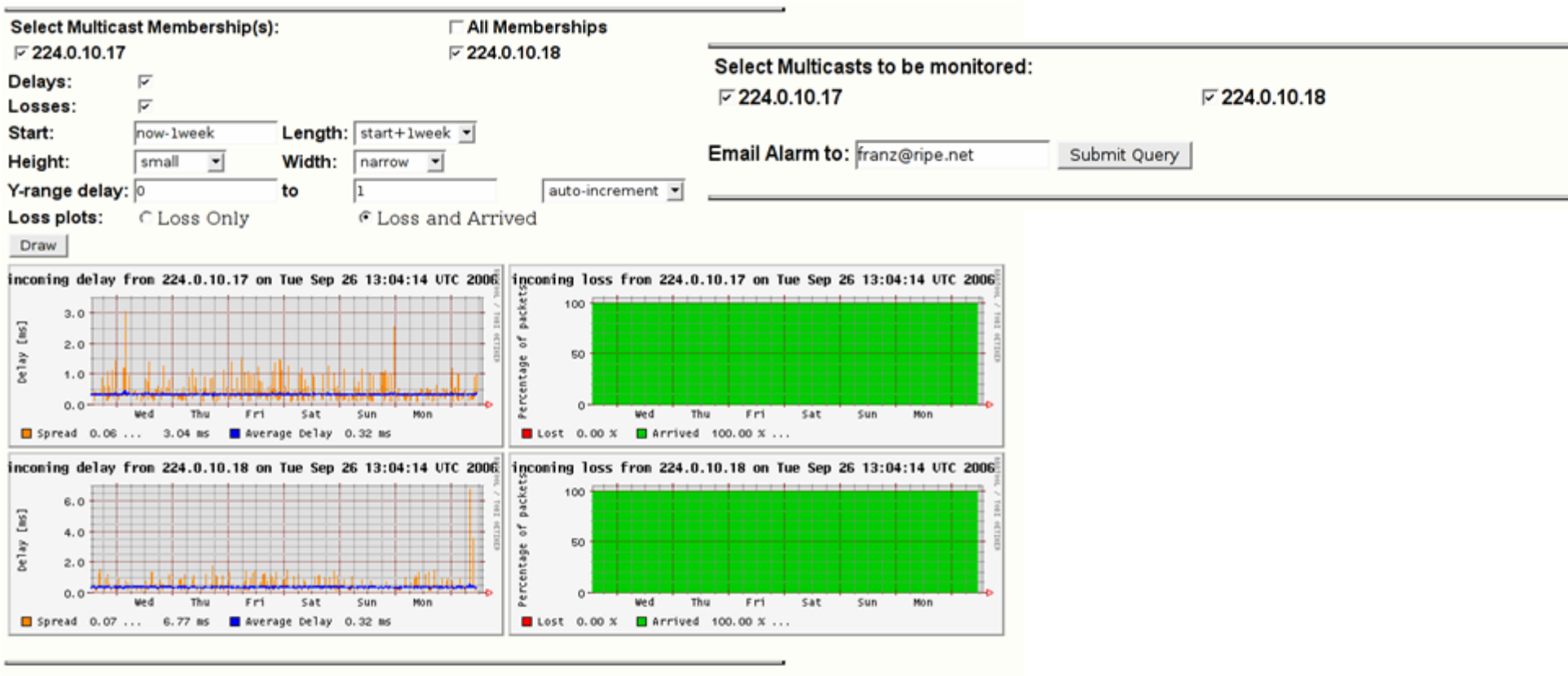 - All inside and **outside** the TTM Network

Overview (II)

- ## Multicast Monitoring Architecture

  - green: finished, yellow: under construction, red: to be implemented

Problem "Pinpointer"		
Listeners' Data & Graphs / Alarm System		
Multicast Beacon & Listener (TTM) / Configuration Interface		Custom Listener (outside TTM)
Unicast	libMcast	
libTB		

TTM specific measurements

- Accurate delay measurements

- Fairly accurate loss measurements

Monitoring outside the TTM network

- Fairly accurate delay measurements

- Highly configurable

  - Expected Rate, Timestamp Offset, Defined Values, Packet Size,...

  - Auto-Configuration

- Configurable Alarms

  - Conditions

  - Sensitivity

  - Email

  - SNMP?

Multicast	Port	Rate	Time Format	Time Offset	Packet Size	Defined Value(s)	Value Offset(s)	Alarm Email	Delete?
12.12.12.12	12	20	UnixTimestamp	0	100			franz@ripe.net	Delete
12.12.12.12	13	0		0	0			franz@ripe.net	Delete
14.14.14.14	14	14	UnixTimestamp	13	13	ef56,a5	12,1	franz@ripe.net	Delete

Conf. Name	Rate	Time Format	Time Offset	Packet Size	Defined Value(s)	Value Offset(s)	Delete?
TTM-Data	20	UnixTimestamp	0	100			
TestConfig	14	UnixTimestamp	13	13	ef56,a5	12,1	Delete

Add a Listener:

Multicast Address: [ ]
Port: [ ]
Alarm Email: [ ]
Predefined: [New Configuration ▼]
Config Name: [ ]
Expected Rate (Packets/10 Minutes): [ ]
Timestamp Format: [UnixTimestamp ▼]
Timestamp Offset: [ ]
Packet Payload: [ ]
Defined Value(s) (hex): [ ]
Value Offset(s) (bytes): [ ]
[Start Listener]   [Start Listener and Save Configuration]

Time Line

Documentation work	Link-Local testing	Getting familiar with TTM/preparation	July
		Implementing multicast beacon (TTM)	August
		Implementing multicast listener (TTM)	
		Graphs and TTM specific UI	September
		Alarm system	October
		Custom listener, Alarm integration and UI	
	Routed testing	Install routed test setup	November
		Implementing problem "Pinpointer"	December
		Overall code review	January
		Move everything in place, write help	February
		Move into production	March

Routed Test Setup

- Link-Local testing sufficient for...

  - Beacons and listeners

  - Alarm system

  - User interface

- Problem "Pinpointer" needs more...

  - Cannot be developed and tested without multicast routing

  - **We need your help!**

? Custom Listener ?

? SNMP ?

Questions?

Discuss!

? Additional Features ?

? Routed Test Setup ?