



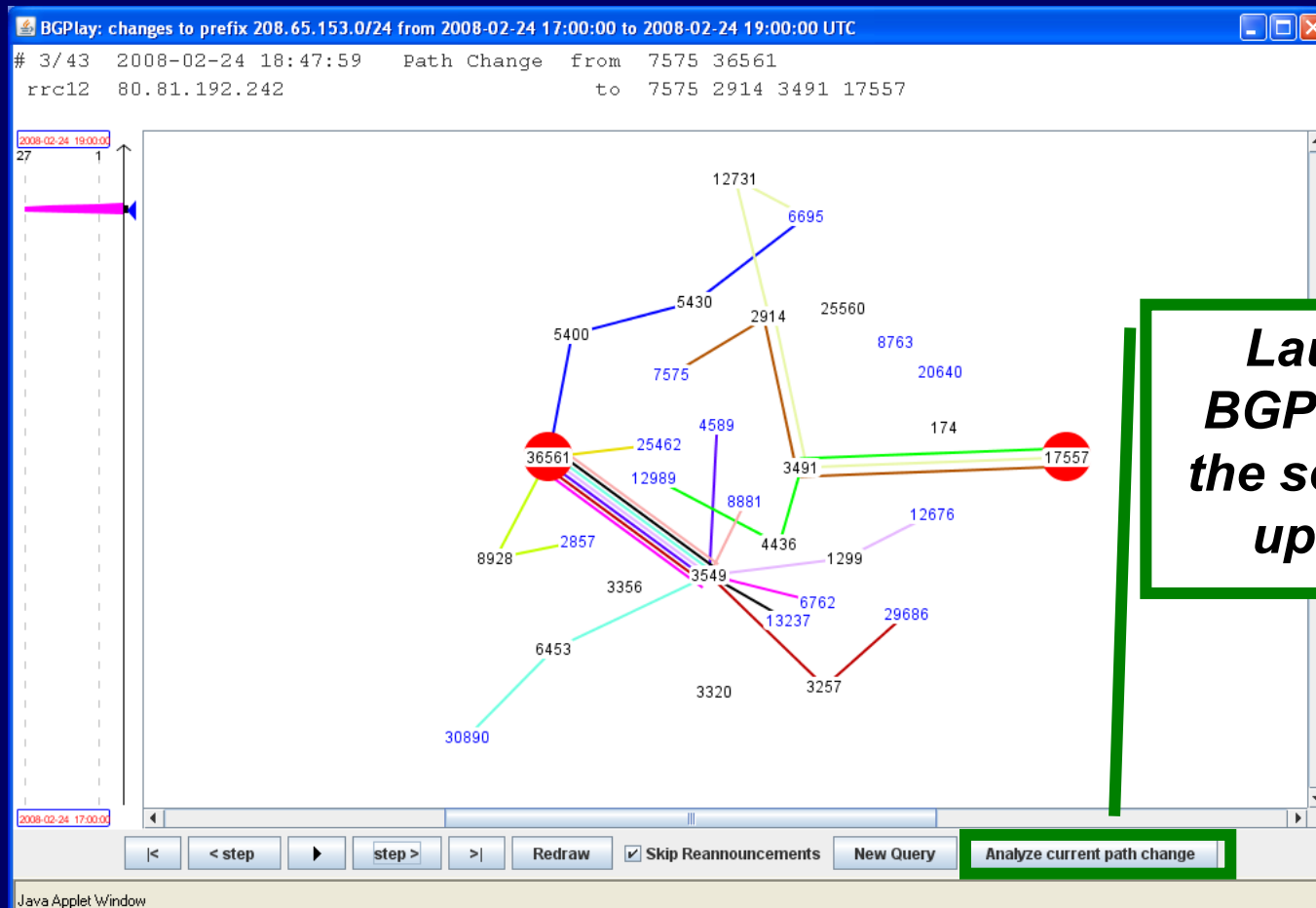
**UNIVERSITÀ DEGLI STUDI ROMA TRE**  
Dipartimento di Informatica e Automazione

# **BGPath: BGPlay and beyond**

Luca Cittadini

# Working with BGPPath

- ✦ Integrates with BGPlay
- ✦ Analyzes a specific update



**Launch  
BGPPath on  
the selected  
update**

# BGPath - overview

Analyzing changes from 7575 36561 to 7575 2914 3491 17557 observed by /80.81.192.242 of rrc12

JTC 2008/02/24 18:47:59 from: 7575 36561  
CP: 80.81.192.242 RRC: rrc12 to: 7575 2914 3491 17557

**Collector peersers**  
CP IP: 195.66.224.138 RIB  
AS: 2914  
CP IP: 195.66.226.138 RIB

**Collector Peersers in route collector rrc03**  
AS: 2914  
CP IP: 195.69.144.36 RIB  
AS: 2914  
CP IP: 195.69.144.152 RIB

**Collector Peersers in route collector rrc12**  
AS: 7575  
CP IP: 80.81.192.242 RIB  
AS: 2914  
CP IP: 80.81.192.46 RIB

**Collector Peersers in route collector rrc14**  
AS: 7575  
CP IP: 198.32.176.177 RIB  
AS: 2914  
CP IP: 198.32.176.14 RIB

```
graph TD; 7575((7575)) --> 2914((2914)); 2914 --> 3491((3491)); 3491 --> 17557((17557)); 7575 -.-> 36561((36561)); style 36561 fill:#f00; style 17557 fill:#0ff;
```

**Rank & other info**  
7575->36561  
7575->2914  
3491->17557  
2914->3491

**Tools**  
 Edge Visibility  
Path Evolution

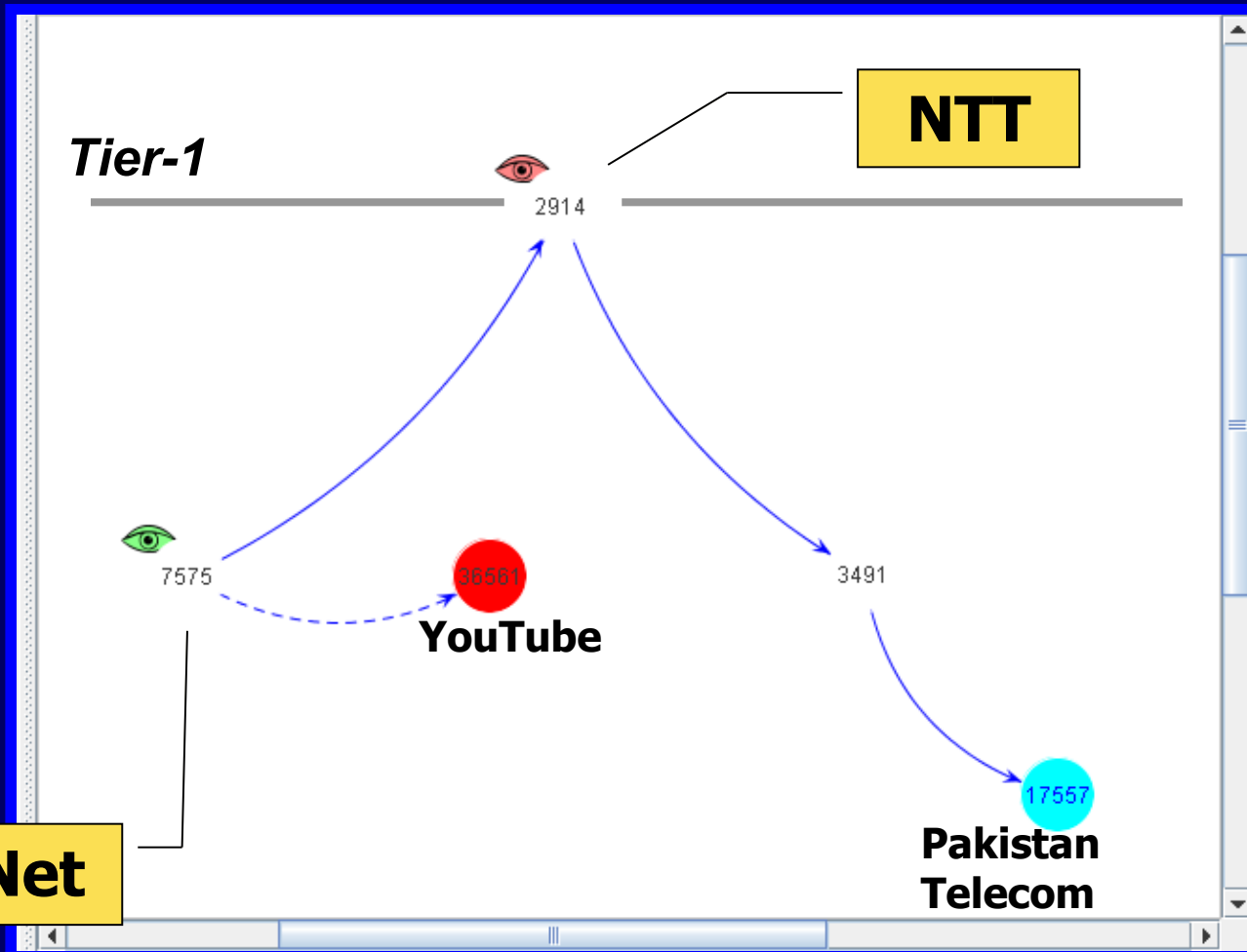
Scale | Alignment | Edge features  
+ | Parallel | Label |  
- | Curvature

Mouse Mode  
Picking

Java Applet Window

# Layered layout

## Customer-Provider hierarchy



# BGPath – Path Evolution

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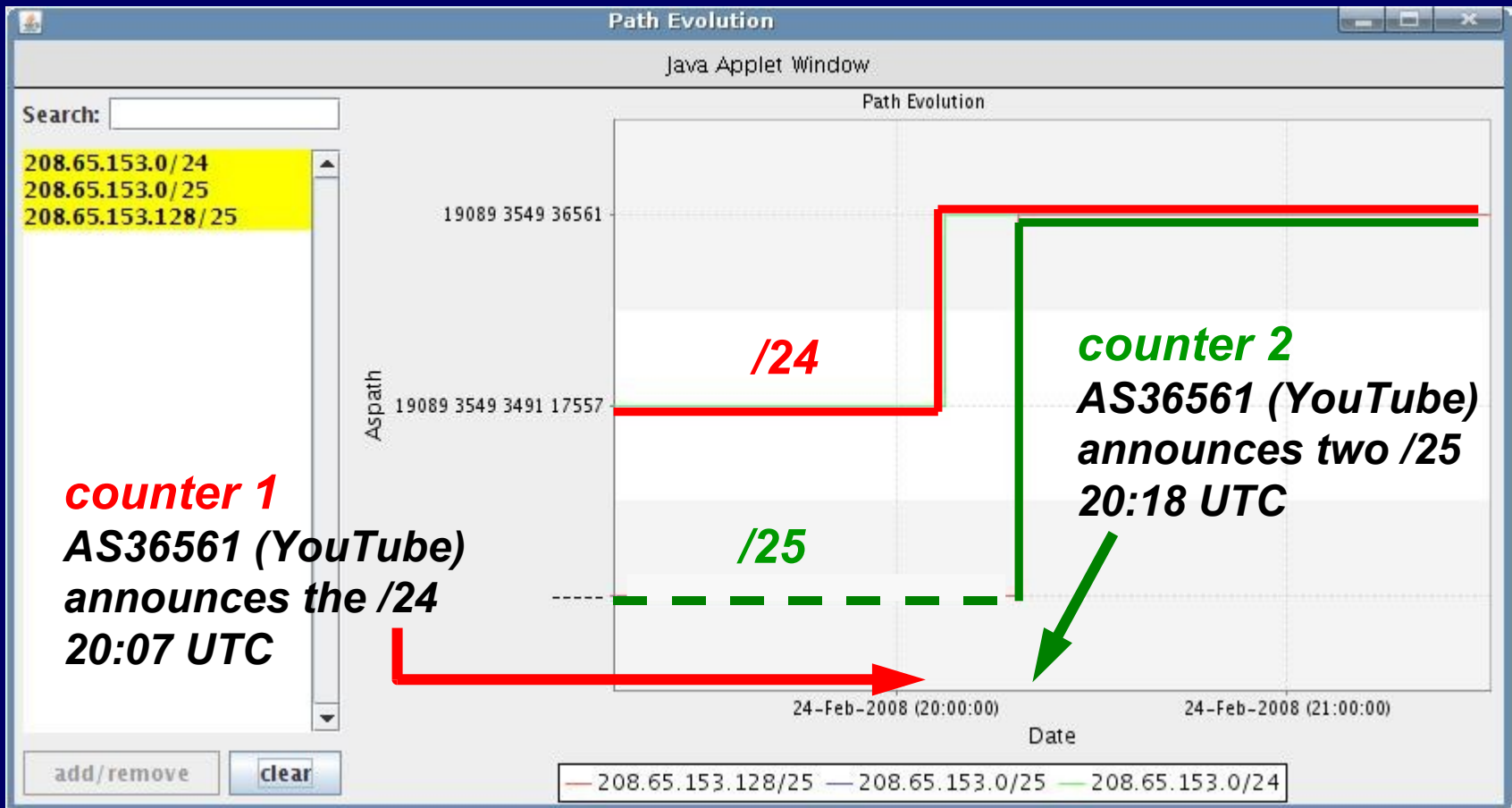
**Tools**  
 Edge Visibility  
Path Evolution

Scale: +, -  
Alignment:  Parallel  
Edge features: Label, Curvature  
Mouse Mode: Picking

Java Applet Window

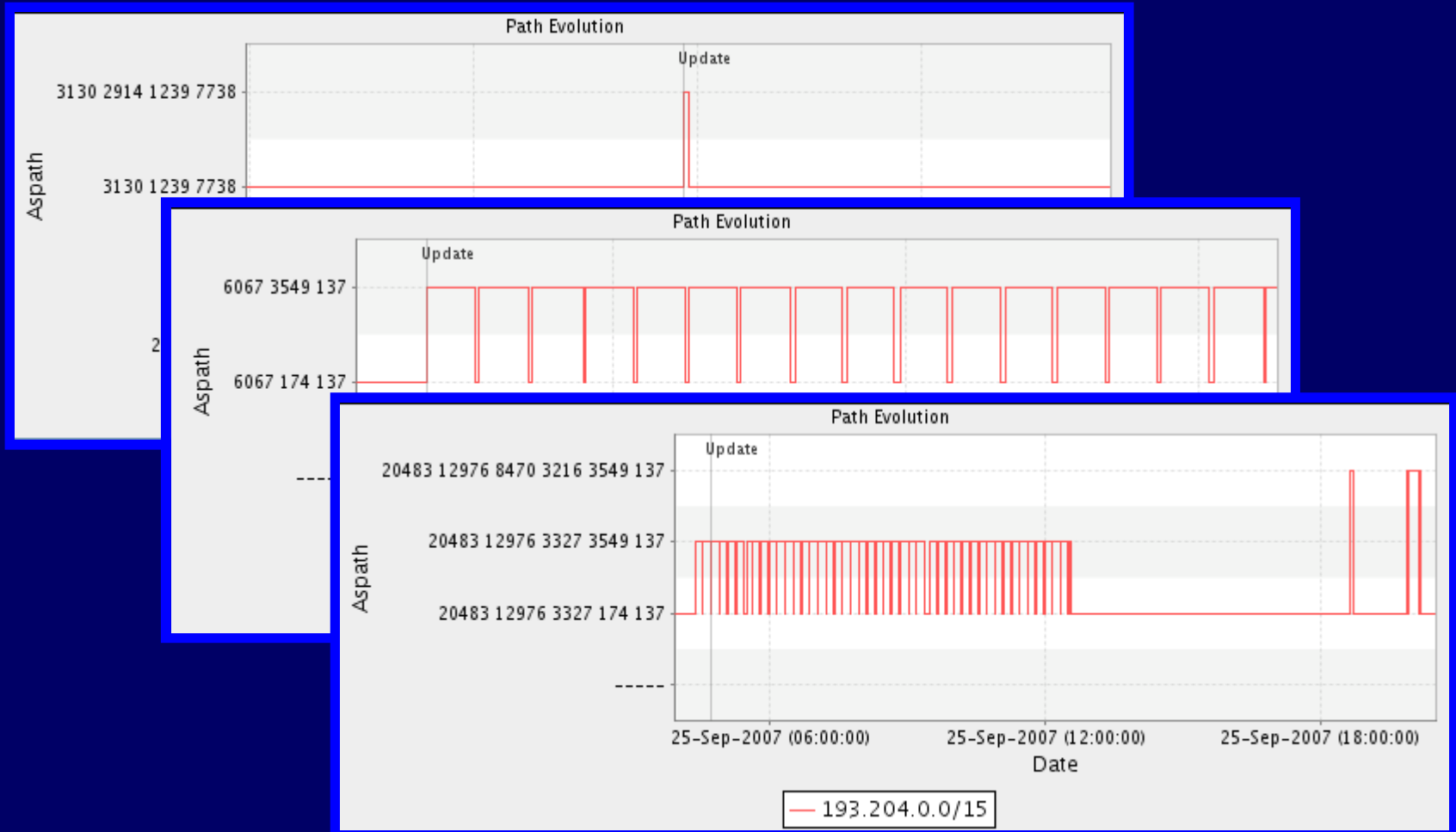
# Visual Path Evolution

- Plot the RIB of selected prefixes over time



# Visual Path Evolution

## Impact of the event over time



# BGPath - Rank

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- Edge Visibility
- Path Evolution

Scale | Alignment | Edge features | Mouse Mode

Parallel | Label | Curvature | Picking

Java Applet Window

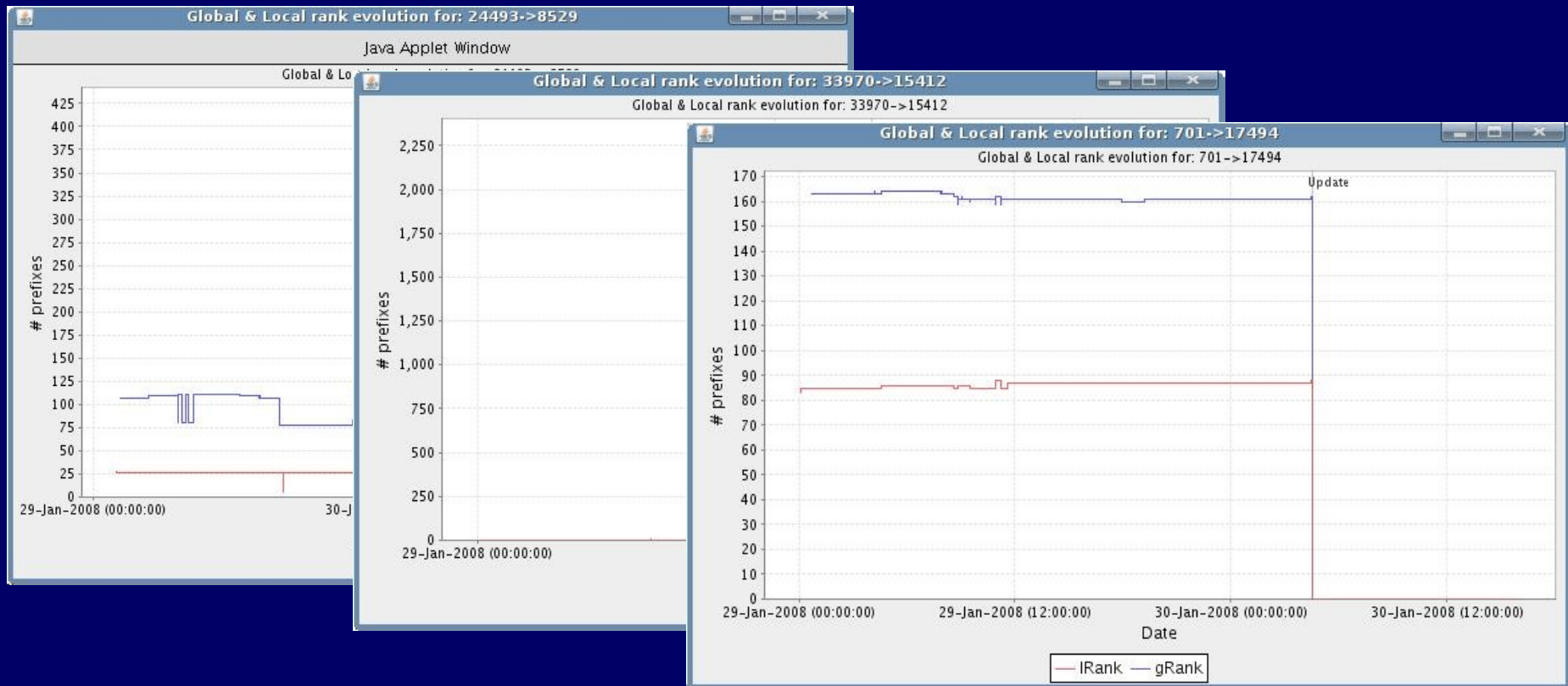


# Rank

✦ rank = #pref on a link

✦ two perspectives:

- **local** – one collector peer
- **global** – all collector peers



# Conclusions

## ◆ Advantages of BGPath

- layered layout
- path evolution
- rank



clearer context  
impact over time  
link usage

◆ <http://nerodavola.dia.uniroma3.it/rca>

## ◆ Future work

- Real-time update processing
- Alert generation

- prefix stability (path evolution)
- link usage (ranks)

◆ Continue cooperation with RIPE NCC



# Thank you!

◆ Questions after Daniel's talk