Connectivity of the Country to the Internet

the open Net

sine qua non

isavnin@theopennet.ru

MENOG16

the open Net

- mobilize technical Internet community
- provide technical expertise
- talk to other stakeholders

Motivation

Summer 2014: Russian Ministries of Telecommunication and Emergency with help of cctld.ru conducted training for «prevention of disconnection of Russia from Internet»
Results: successful, details classified.

Autumn 2015: Participant of training: actually it was training for disconnection Russia from Internet.
Results: unsuccessful.

Concerns

- Are we well connected?
- Are we protected from evil insider or outsider?
- How to measure?
- What to do?

Measure

Registries:

- Number of «local» prefixes and ASes

Routing info:

- ASN/prefix availiability

- BGP paths

- diversity and stability

Measure (this study)

Simplified (just for start)

- number of ASes in selected country
- number of links between ASes (local and non-local.
- number of ASes involved in international connectivity (from both sides of border)

RIPEStat by RIPE and BGPstream by CAIDA

Real user

Russian «Internet Protection Society»

- Using number of links «outside» Russia as an «Connectivity index»

- Also have «Internet Liberty Index» for demonstrating number of censorship events.
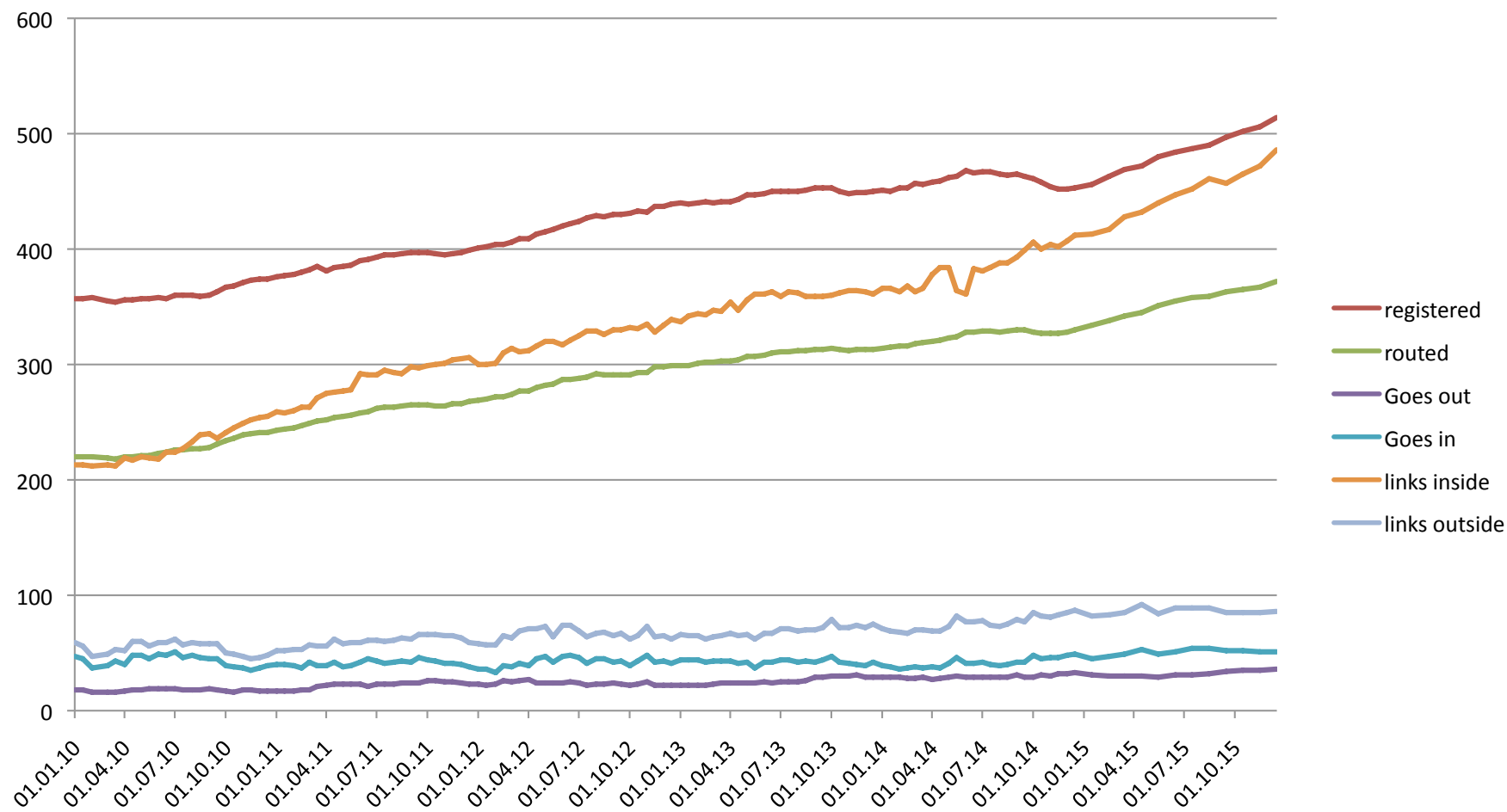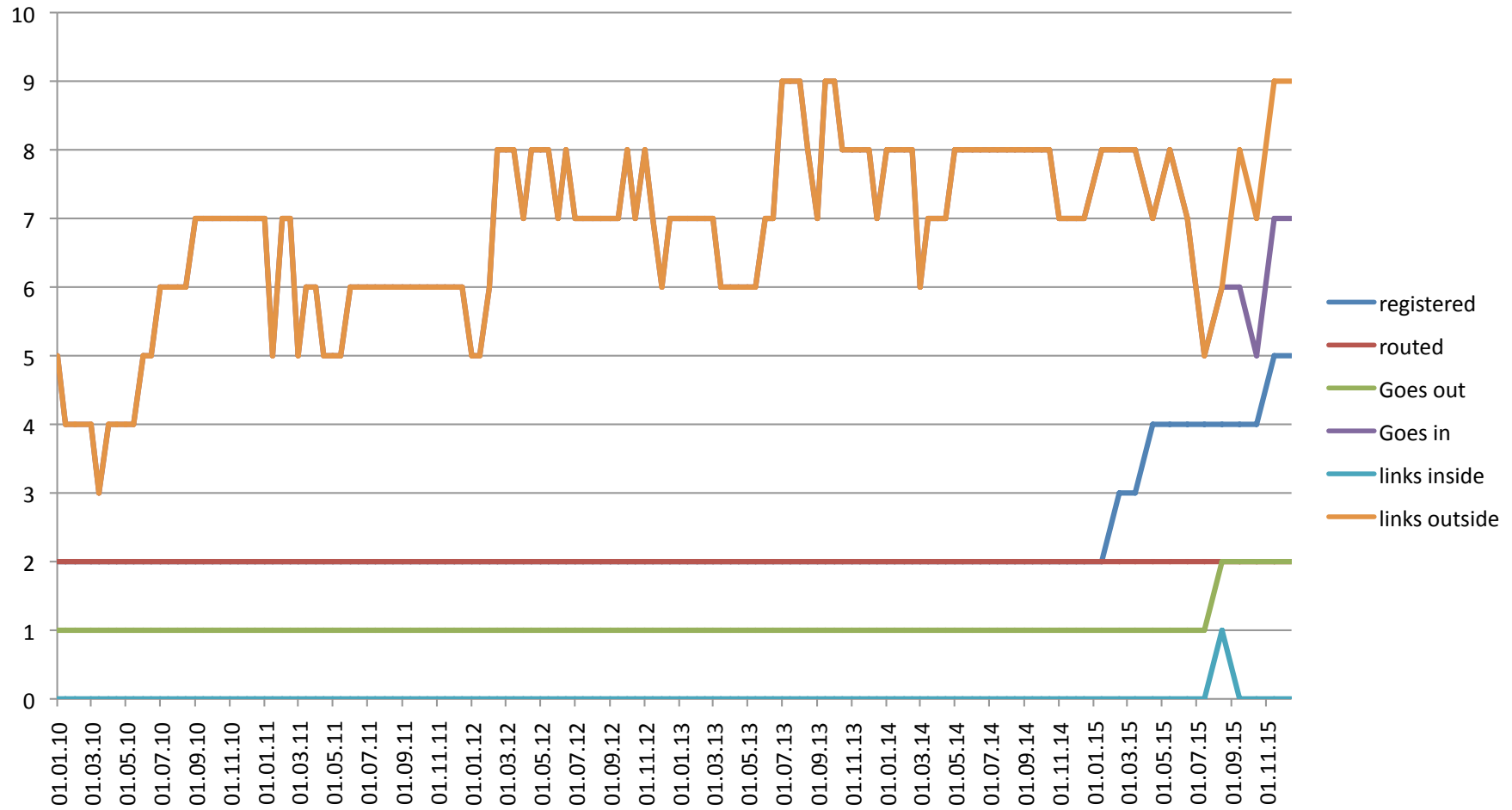
Internet Protection Society

Comparation

- changes by time
- ratios – allows comparation between countries/regions
  - number of «connected» ASes normalized by overall number of ASes
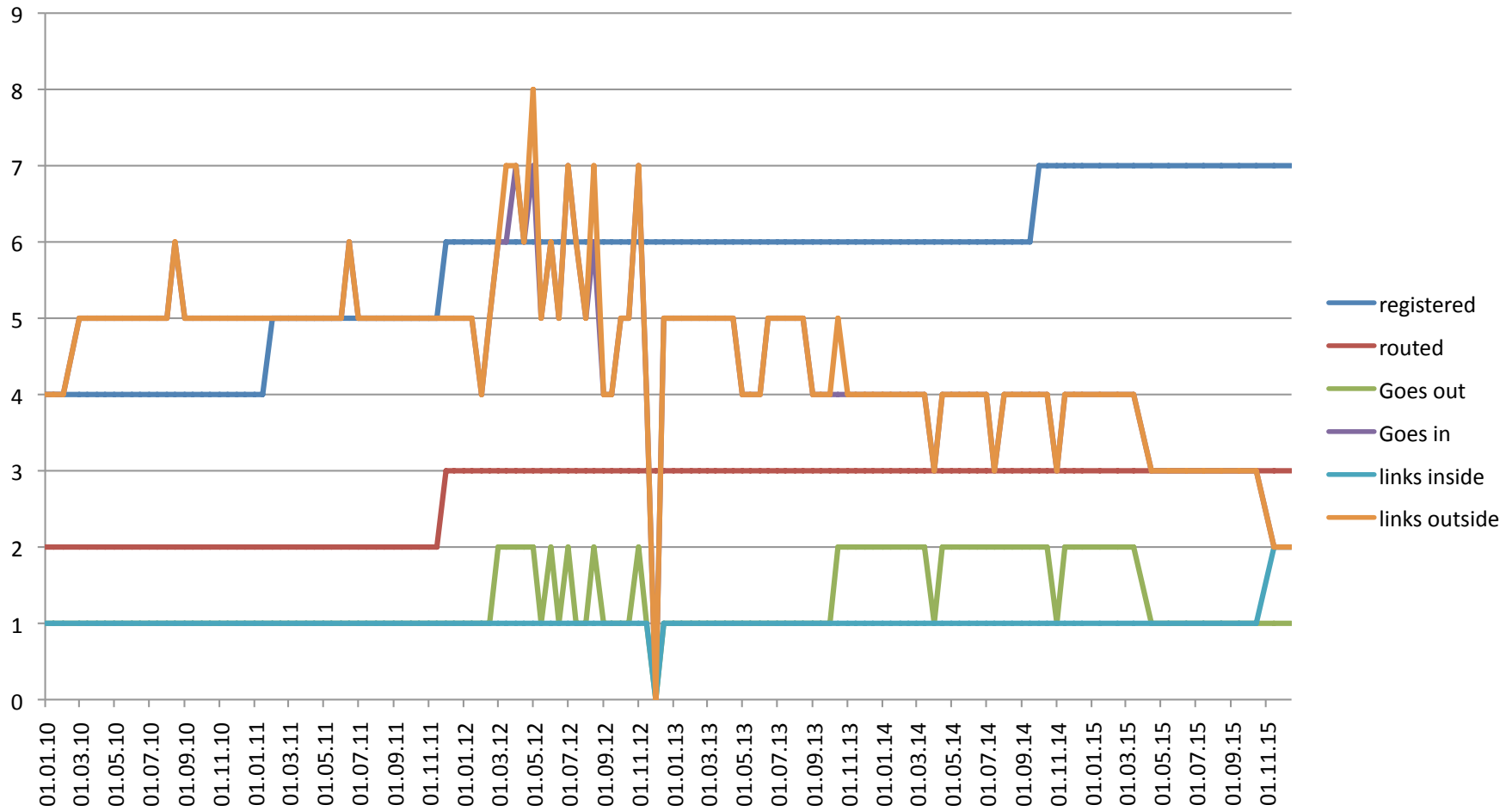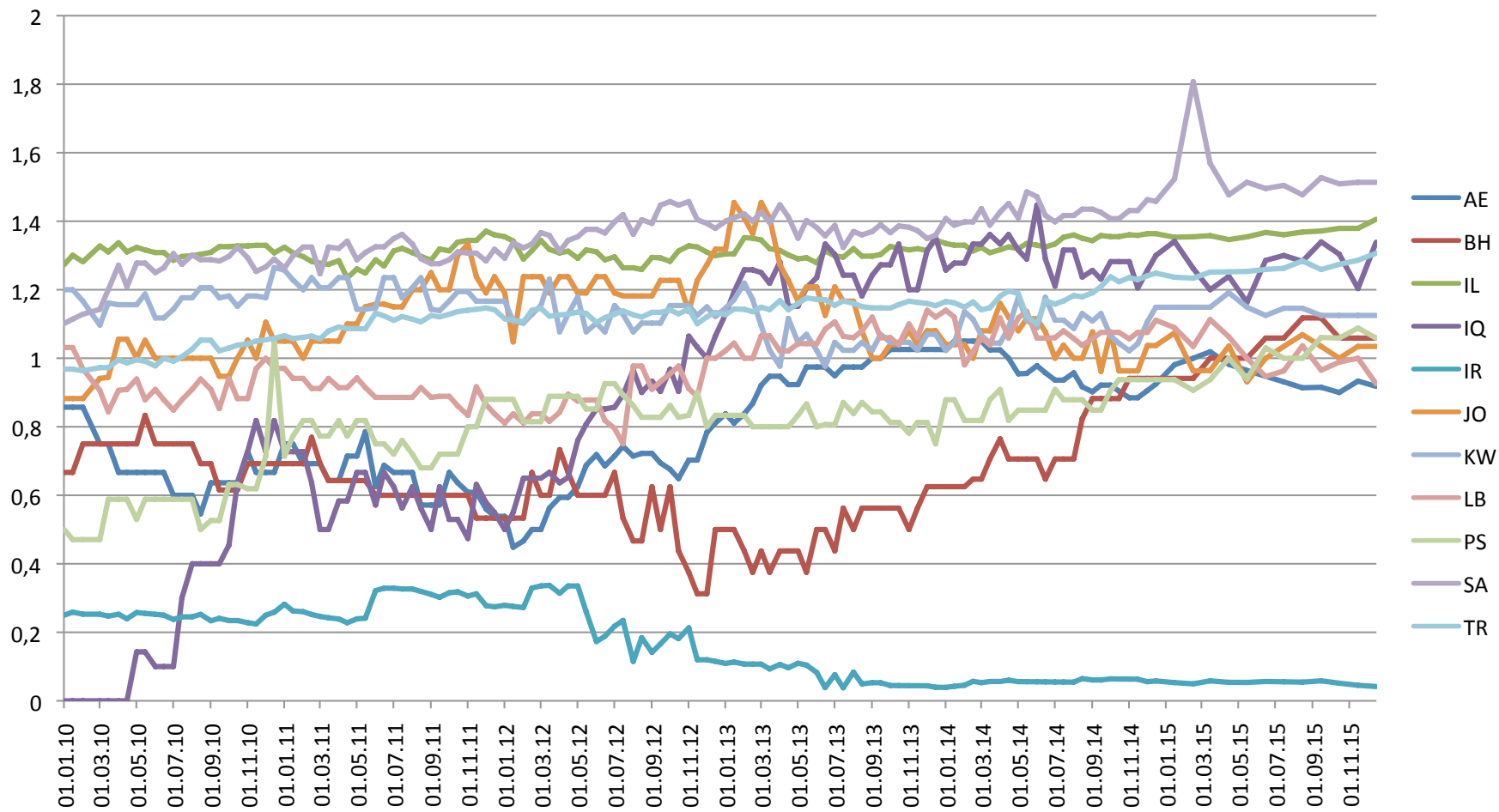 - number of links/number of ASes

Our hosts - Turkey

Yemen

Syria

Links inside country

Other projects

- The Internet Outage Detection and Analysis (IODA) by CAIDA (not publically available yet)

Future works

- paths
  - outside country/region
  - to specific set (Tier1s, content)
- realtime
- online tool
- real-life relations