Ideas for IRRToolSet NG

Possible Goals for a Toolkit NG

- A toolkit as a collection of interoperable modules that
  - can be put together to enable definition, distribution and configuration of an ISP routing policy
  - require minimum modifications to the existing methods, processes and practices employed by an ISP

Software Maintainability and Evolution

- Maintainability and evolution
  - deal with changes and adaptions of the software
  - accommodate new or changed user requirements which concern functional enhancements
  - deal with errors found and fix it

Modular Design

- Modular design principles
  - partitioning into reusable modules consisting of isolated, self-contained functional elements
  - rigorous use of well-defined modular interfaces, including object-oriented descriptions of module functionality
  - ease of change to achieve technology transparency and, if possible, make use of industry standards for key interfaces

- Support maintainability and evolution
  - deal with complexity of software system
  - flexibility in design
  - adding functionality by (merely) plugging in a new module, or vice versa (exclusion)

Redesign Front/Back-End Code

- See previous slides for design principles

- Provide library API to develop against
  - a good library can take on a life of its own

- …

Integration with OSS Workflow and Output Formats

- Flexible tools
  - provide building blocks for network operators
  - flexible to choose routing information from different resources/repositories
  - support for/integration of RPKI tools
  - …

- Output format to systems and routers
  - XML or JSON for system interoperability
  - converge to single router configuration specification (maybe a long shot?)
  - …

Real-time Distribution of IRR Data

- Publish/subscribe IRR data
  - real-time stream of IRR data update
  - operator can decide on update frequency (30 min, hour, 4 hours, ..., day)
  - ...

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