Android Explicit Monitoring App

HotRFC - IETF 109
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Android Explicit Monitoring App: Goals

- Provide a mobile tool for traffic performance monitoring in the era of encrypted transport protocols also using Explicit Flow Measurements (EFM)

*Explicit Flow Measurements* employ few marking bits, inside the header of each packet, for loss and delay measurement (protocol independent and valuable for encrypted headers: e.g. QUIC)
TIMquic APP

- Giving the monitoring power to customers:
  - Android Explicit Monitoring App based on Ericsson Spindump open-source code: TIMquic
  - Presentation and PoC App live Demo at Hackathon IETF 109

- First idea introduced in HotRFC 108:
  "How to measure Network Performances with user devices"
  https://www.youtube.com/watch?v=YYTPVNGpUog

- Related drafts:
  - Explicit Flow Measurements (draft-mdt-ippm-explicit-flow-measurements)
  - User Devices Explicit Monitoring (draft-cnbf-ippm-user-devices-explicit-monitoring)

- Spindump library: github.com/EricssonResearch/spindump
Android Explicit Monitoring App

Placing the Explicit Performance Observer on user devices gives many advantages in terms of scalability, measurement precision and savings in hardware deployment.

Real time mobile traffic monitoring!

Patent Pending
Android Explicit Monitoring App

We can see our connections performance while enjoying the service

Operators, with the customer's permission, may use this information to identify network problems and improve the customer experience

Patent Pending
Android App Main Features

• The customer chooses whether to mark his mobile traffic making it monitorable by the Android App and network probes.
• The customer chooses whether to share the performance data that the App on his mobile phone has collected.
• The App can put performance thresholds on the probe in order to signal connections with problems to the network operator. Thus the network probes will primarily monitor impaired connections and help to localize problems.
How to know more

- **Drafts presentation:**
  IETF 109 IPPM WG meeting, 12:00-14:00, Monday Session I, Room 8

- **Hackathon** IETF 109 – QUIC Measurements Project.

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