Instrumented Multi-Platform Overlay for Networked Systems Research

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Project Overview

» Multi-Platform
» Overlay network of modern devices: Smartphones, etc
» Telemetry and Data gathering
» Support for On-premises and Cloud-based
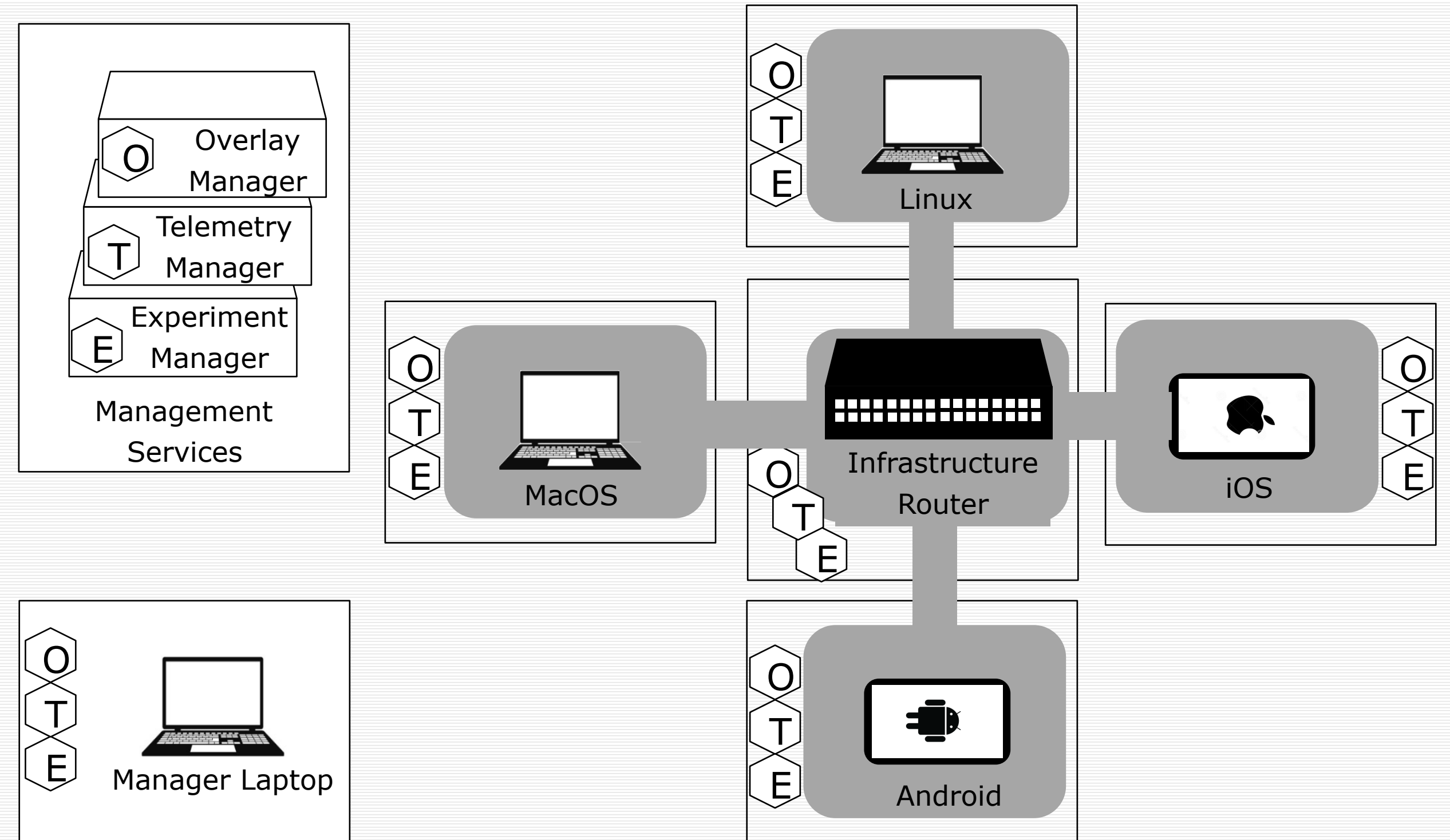» Sidecar Architecture supporting
  » Telemetry
  » HTTP, TCP, UDP Overlay

Recent Progress/Current Status

» Live Interactive, Audience Participation Demonstration at IEEE ICNP 2023
» ICN Poster(s)
» Aggressive use of open-source software:
  » Linux Software Routers (SWR)
  » Sidecar: Envoy Proxy
  » Telemetry tools:
    » Prometheus
    » Grafana
    » Jaeger
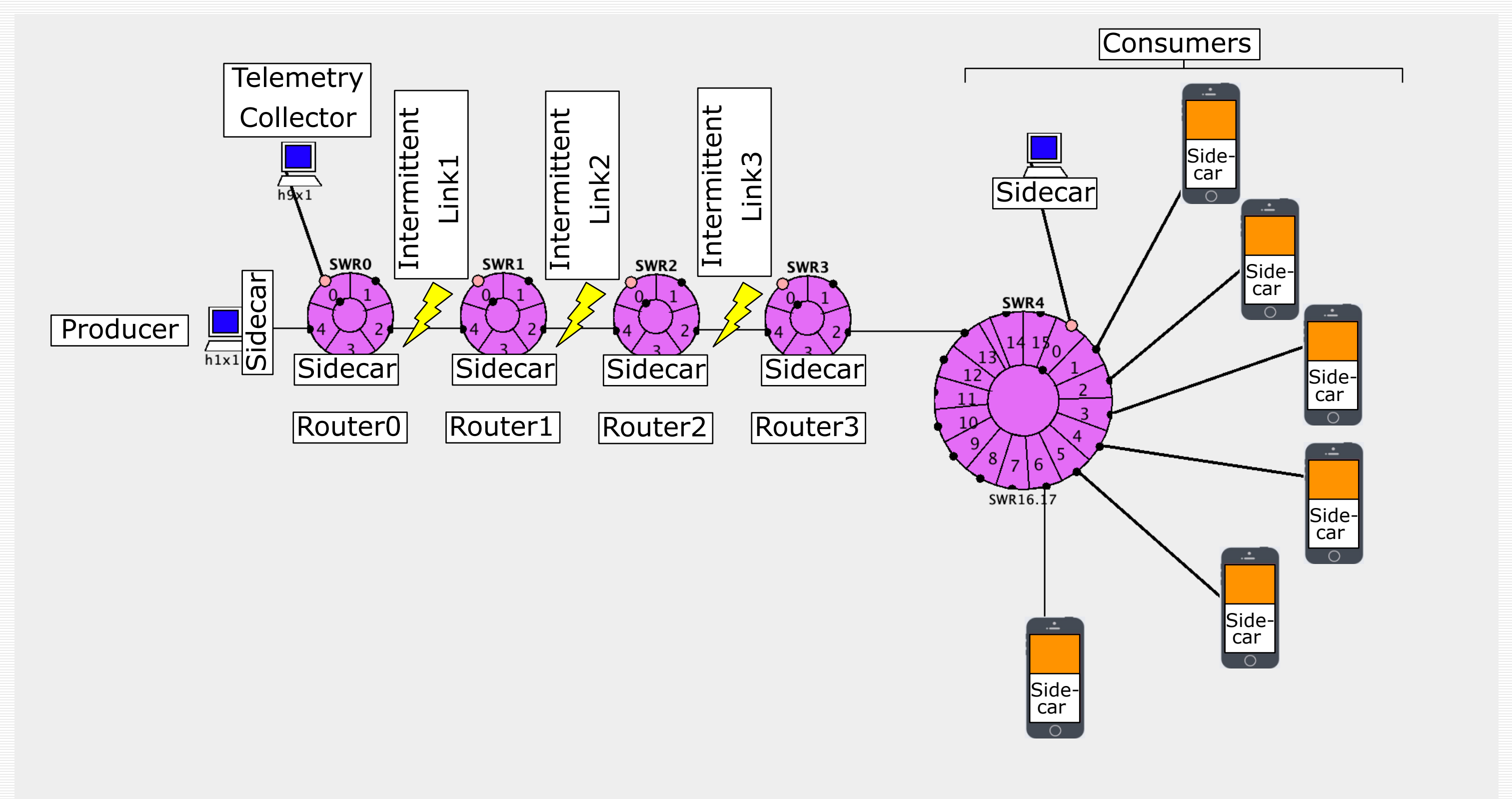
Next Steps/Future Work

» HTTP2 and HTTP3
» Docker Compose support for topology
» Open-source release

Instrumented, Multi-Platform Overlay

Experimental Overlay from IEEE ICNP 2023 Demonstration

Telemetry Visualization from IEEE ICNP 2023 Demonstration