













presented Haystack [37], a system for unobtrusive and comprehensive monitoring of network communications on mobile phones, entirely from user-space. Haystack correlates disparate contextual information such as app identifiers and radio state with specific traffic flows destined to remote services, even if encrypted. Haystack facilitates user-friendly, large-scale deployment of mobile traffic measurements and services to illuminate mobile app performance, privacy and security. Srikanth described the design of Haystack and demonstrated its feasibility with an implementation that provides 26-55 Mbps throughput with less than 5% CPU overhead. He stressed that the system and results highlight the potential for client-side traffic analysis to help understand the mobile ecosystem at scale.

## 5. CONCLUSIONS AND NEXT STEPS

Participants with a mix of senior and junior researchers hailing from both academia and industry encouraged fruitful dialogue. A number of future research agendas were recognized. Brian Trammell volunteered to initiate further discussion on the seminar mailing list towards measurement platform integration. An action item to create a code repository to hold basic primitives that can output results in a machine readable manner was created. Furthermore, discussion on an Internet measurement cloud for not only storing measurement results but also facilitate its reliable distribution will begin. The organizing team also received valuable feedback. An interest to identify a specific problem to try to tackle it during a prospective future seminar was identified.

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