



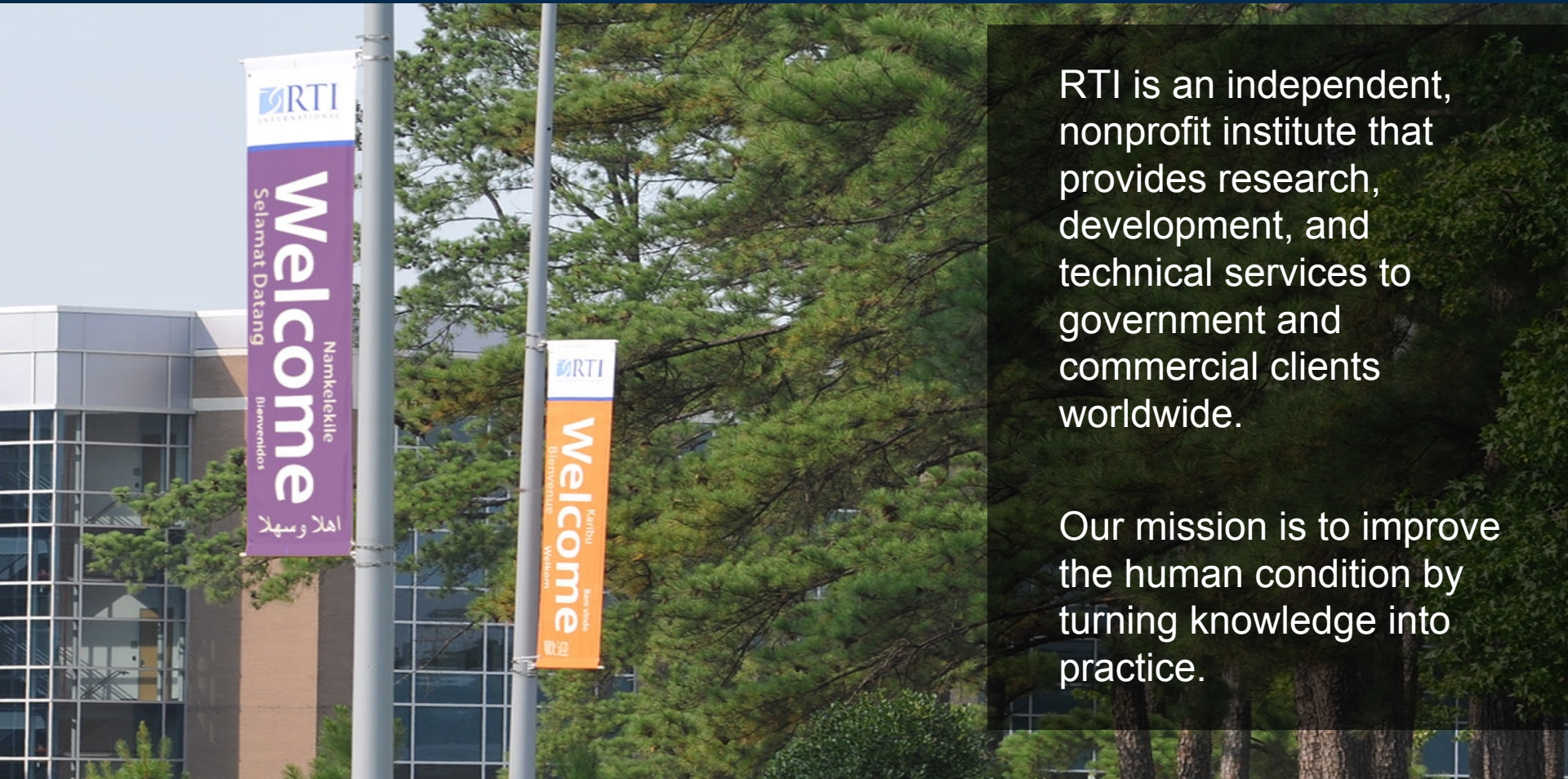
# Securing Survey Data on Android Devices

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Presented by Matt Boyce

Authored by Charles Loftis, Matt Boyce, Mai Nguyen

# Who Is RTI International



RTI is an independent, nonprofit institute that provides research, development, and technical services to government and commercial clients worldwide.

Our mission is to improve the human condition by turning knowledge into practice.

# Agenda

1. Introduction/Motivation
2. Problem
3. Our Approach
4. Conclusion

# Introduction/Motivation



- Why Use Android?
  - Superior portability.
  - High definition screens.
  - Sensors like GPS or camera.
  - Long battery life.
  - Competitive prices.
  - Available worldwide.

# Introduction/Motivation

- Drawbacks of Android
  - Portability = easily stolen.
  - Sensors and screens = high value targets.
  - Field staff use their new devices inappropriately.
  - Employees that go rogue or vanish.



# Problem

- Concerns

- Surveys generally contain PII.
- Usually have other sensitive information.
- Device/data security is critical.



- Goals

- Maintain ease of use and features.
- Secure data locally and in transmission.
- Provide remote and timed “kill switch.”

# Our Approach



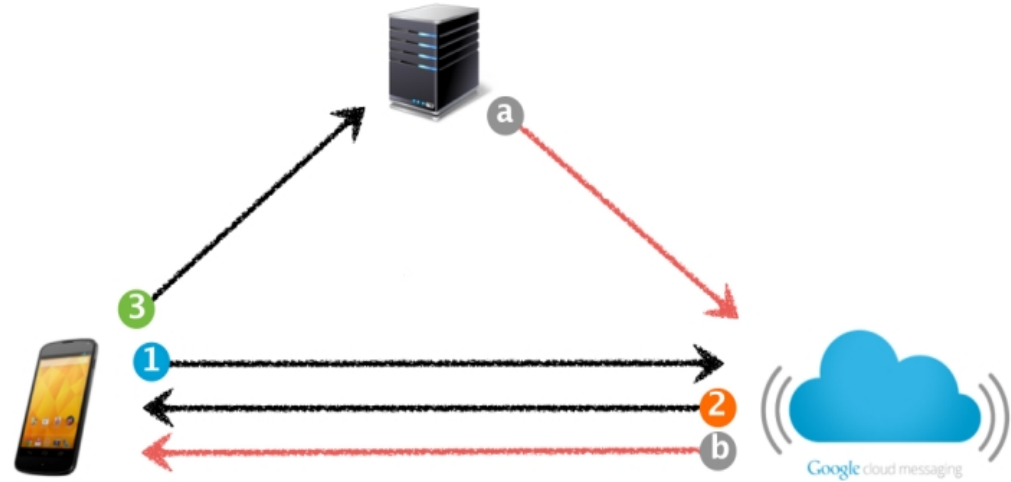
- Basic Device Security
  - Password or PIN on device.
  - Different password on the app.
  - Turn on device encryption.
  - Enable attempt based wipe.





# Our Approach

- Remote Wiping/Messaging
  - Supervisors can send messages, lock devices, and wipe data
  - Commands can be sent to individuals or some/all field staff.
  - Requires some form of internet connection on the device.



Flow Diagram using Google Cloud Messaging  
Black - Registration Flow, Red - Message Flow

# Our Approach



- Protocol Violation Wiping/Messaging
  - Can be tied to transmission or other scheduled actions.
  - Time interval can be controlled remotely.
  - Can escalate: warning message, change of password, eventual device wipe

# Conclusion

- Android Benefits

- Portability and sensors
- Price and availability

- Android Concerns

- Targets for theft
- Contain sensitive data



- Our Solution

- Basic device security practices
- On demand local encryption
- Compliance through local timers
- Ability to remotely message or wipe

# More Information

**Matt Boyce**

Mobile Application Developer

919.316.3500

[mboyce@rti.org](mailto:mboyce@rti.org)