NIST Big Data Public Working Group

NIST Security and Privacy Subgroup Presentation
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Key Points

- Overview: Security & Privacy within the NBD-PWG Ref Architecture
- Security & Privacy Use Cases
- Security Fabric
  - Fabric Computing analogy pro and con
- S&P Design Patterns Refresh
  - For Greenfield
  - For Hybrid and Legacy Implementations
  - GRC, risk models, forensics
- Next Steps
  - NBD-PWG Security & Privacy "Phase 2"
- Related Work

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Privacy

- Big Data-Specific Related Privacy Efforts
  - NIST Privacy Engineering Workshop
  - Privacy-by-Design for Big Data
  - Oasis Privacy Management Reference Model
  - Kantara Initiative
  - Agent-based privacy for distributed systems
  - Privacy audit protocols
  - Toxicity Model for PII in SDLC

Mark Underwood

- CEO and Founder, Krypton Brothers @*Knowlengr*
- Blogger in Big Data, ETL, transparency & literary fiction
- NIST Big Data Working Group: Security & Privacy subgroup (Co-chair with Arnab Roy)
- ASQ Certified Software Quality Engineer
- Interests
  - Knowledge-based systems
  - SDLC quality management
  - Complex Event Processing
  - Network Cognition
- Consulting at Estee Lauder, Nielsen Homescan, AT&T FS, Honda (East Liberty), Qualcomm, Elsevier
- Co-investigator for DoD projects in machine intelligence, sensor fusion, context activated memory, speech recognition
- Co-founder / founder two previous tech firms

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Discussion Questions

- What is the best way to engage less technical audiences in S&P issues without losing geeks who are rapidly advancing the state of the art (cf. Apache Big Data projects)?
- Storytelling is an effective way to communicate a complex set of issues without having to explain everything in detail. What stories have worked for you (even if not in Big Data)?
- What Big Data needs will drive standardization? Interop? Data exchanges? De facto software standards (e.g., Hadoop)? Regulation? Risk Management?
- What's different about streamed Big Data that will bring about changes in design patterns?

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