Cybersecurity Research Seminar
Fall 2015

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#3: Teams, Statement of Work

Class #3

- Discussion of project teams & topics

- Talk about Statement of Work

- Other upcoming deliverables

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Teams

- Based on all of the bids from across institutions, the Purdue group has formed preliminary project teams
  - Balance across topics, TDs, etc.
  - Preliminary CMU teams:
    - Vehicle Data Bus Security: Raaghav, Cory, & Rajiv
      - In parallel with team at UMBC
    - Control Flow Integrity: Jeff & Michael
    - Cloud Forensics: Preeti & Sumana
    - IoT Forensics: Chase & Roger
    - Tbd: Tian

Statement of Work

- The SoW for a research project can be a little different from that of other project types. It should include:
  - What do you hope to do?
  - Why do you want to do this?
  - What is new about it?
  - What is the potential impact?

- This SoW will look in many ways like a "proposal"

SoW Components

- More specifically, your SoW should contain:
    - Preliminary critical review of previous related work
    - Specific project goals
    - Plan of attack
    - References
    - List of deliverables
    - Schedule of milestones
    - Budget (including time and other non-$ resources)
    - Challenges / risks
    - Plan B, maybe C, maybe D…

Preliminary Lit Review

- Note: preliminary *critical* review of related work
  - Last week, we discussed how to identify if a paper was relevant...this is different

  - Now, you need to be able to say what they did/didn't do, how well they did it, what assumptions they made that you don't like, limitations, etc.

Project Goals

- Concise yet specific, notable yet achievable

Plan of Attack

- How do you think you will approach / achieve your project goals?
  - This must be reasonable, well-thought out, etc.

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Deliverables

- Not just presentations and reports, but deliverables specific to your project

Schedule

- When do you hope to achieve goals, attain deliverables, etc.?

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Budget

- Detailed breakdown of any costs associated with your project plan
  - Monetary costs: including hardware, software, services, …
    - These all need to be approved before going forward.

  - Time: team efforts toward various aspects of the project

  - Resource costs: TD, faculty, external resources, …

Challenges / Risks

- Try to do a fairly involved risk analysis of your project goals and plan
  - What could go wrong? Is there uncertainty? Are you relying on certain assumptions that you're not sure of?

  - What happens if things don't go as planned?

  - Have a Plan B, C, D, ...

Additional Info

- The SoW document should contain additional information about the team, plans for project output, etc.

- Complete details are available in the SoW template posted to Blackboard

SoW Presentation

- Locally at CMU, we'll also do a round of SoW presentations, tentatively scheduled for 9/23

- Presentations will be brief
  - Likely 1-3 slides, ~10 minutes
  - Presentation template to be posted very soon

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Literature Review

- As part of the research project, I'm asking each team to also do a literature review / survey.

- This is separate from the SoW but should be done in parallel.
  - This is likely the foundation of some your goals, approach, etc.
  - Much deeper and more detailed than preliminary review in the SoW.

- Lit review is a separate document, due early Oct.

Lit Review Contents

- The "story" of your lit review will be similar to that of your SoW, but focusing on the broader problem space
  - Critical analysis / comparison of existing works in the field
  - Summary of what has been achieved
  - Summary of what has not been achieved
  - Identification of a few interesting open questions or problems of future interest

- Template / format to be specified.

Note on Friday Classes

- The full group will not meet on all Fridays. However, this time is set aside by all TDs, so it's a good time to schedule your weekly meetings with them.
  - No Friday class this week 9/18 – use the time to meet with your teams and work on SoW
  - Session on 9/25 on data management
  - No full-group Friday sessions until mid-October
  - I can be available during this class time to meet and help with projects

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September 23:
SoW Presentations, Next Steps

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