# On the Insecurity of Microsoft's Identity Metasystem

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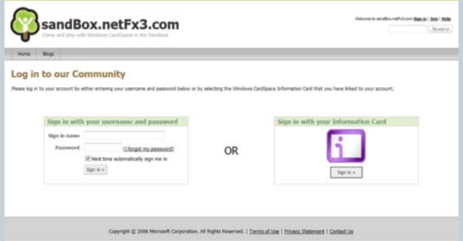
# Summary

- Identified a vulnerability shared by browser-based authentication protocol
- A proof of concept implementation of the attack building on dynamic pharming [VA Ka07]
- Proposed two countermeasures

# Attack



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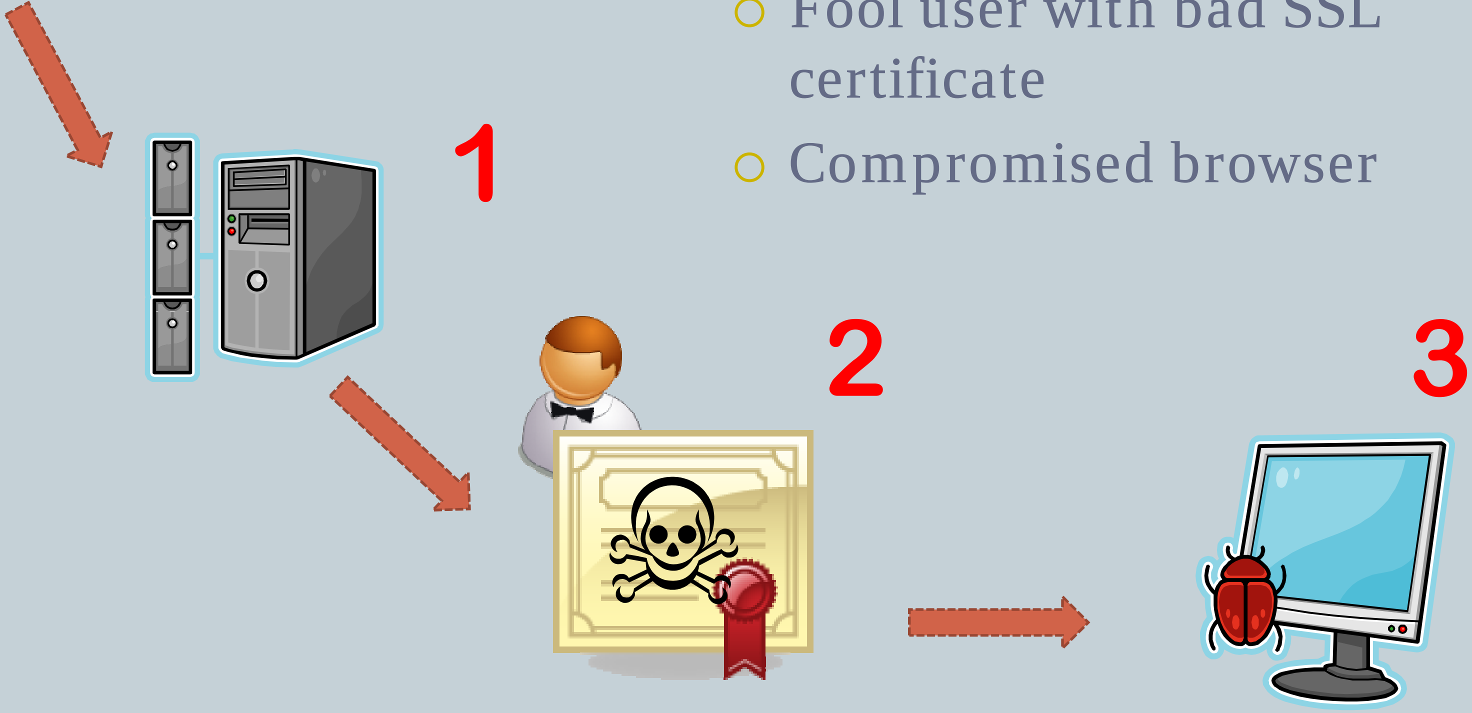
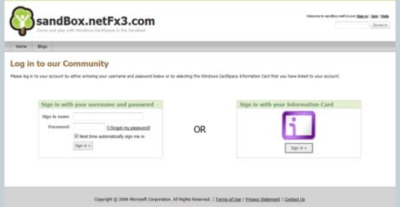


- Compromised DNS
- Fool user with bad SSL certificate
- Compromised browser

# Critical comment

- How likely would that happen?
  - DNS
    - Well studied
  - Certificate warning
    - Troublesome process to install an invalid root certificate
    - IE 7 & Firefox's full page warning



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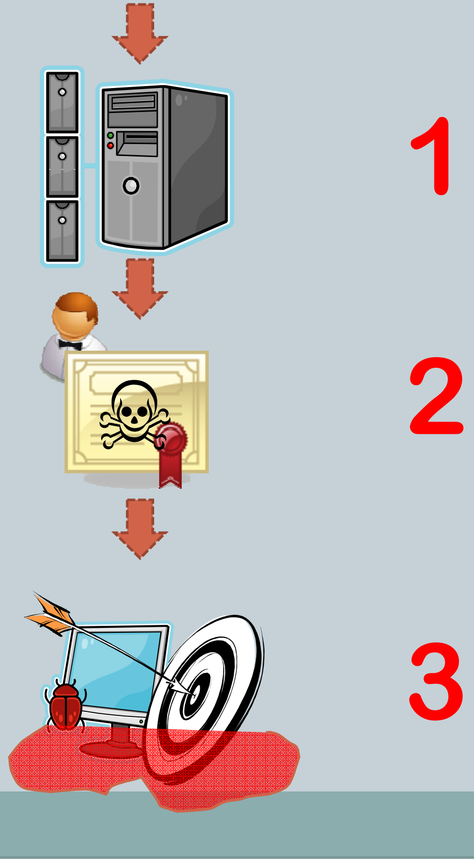

# Appreciative comments

- Demonstrated the severity of SOP problem
  - Shared by all browser based authentication systems
  - Weakest link theory
- Proposed two countermeasures
  - Easy to implement
  - Protection around Cardspace’s security token

# Question

- What would be the most urgent thing to do?

**Enhance CardSpace to address the issue identified**

**Evaluate the security of CardSpace and its running environment as a whole**

**Update SOP**