
Graphical Passwords



Possible Collaborative Project

Motivation

- Text-based pass-“words” either
 - Either provide strong guarantees against cracking by properties of length, character selection, lack of mnemonic quality, absence of ties to individual’s characteristics
 - Or are easy for users to remember without resorting to memory aids that may weaken the password’s security

Graphical passwords

- Pictures, icons, images, drawings, etc. are an alternative to textual passwords
- Hypothesis: people find it easier to remember graphical information than textual information
- Graphical forms may be harder to “hack” by automated means
- Forms:
 - Selection of a graphical element from a menu
 - Identification of a point in a scene
 - Selection of a sequence of graphical elements or points that represents a meaningful easily recallable pattern

Recall-a-story

- Construct a “story” using a palette of provided images
 - Choose background
 - Select and place images on the background
- Password =
Background + ((image₁, position₁), ... (image_n, position_n))
- Example: starting a barbecue, playing soccer beside the house, dog burns tail on barbecue



Project

- Collaborate with Yves Maetz (Thomson Technology Group, France)
- Build a suitable test environment
- Design and conduct user studies to assess the usability of tell-a-story graphical passwords against text passwords
- Issues:
 - Memorability (short term, long term)
 - Population (VT students, children?, elderly?)