

The Power of the Administrator versus the Security of the User

Research Question

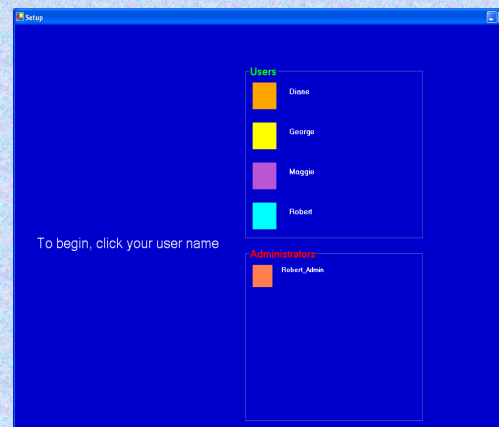
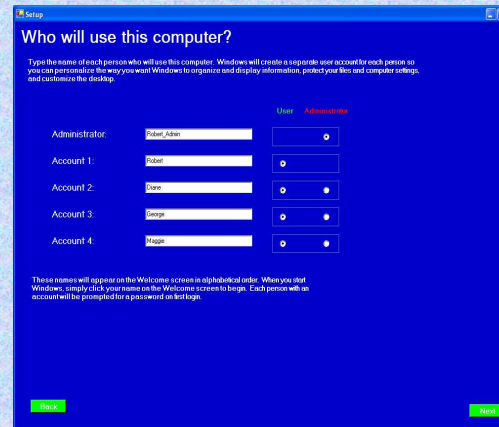
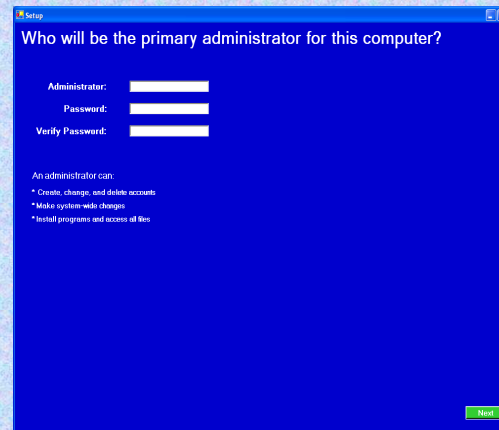
- Uninformed home computer users are increasingly being targeted by attackers
- Many home users do not practice the **principle of least privilege**, leaving them even more vulnerable.
- We explored what might cause a person to use their machine with full privileges rather than minimal privileges and designed a user interface that makes the most secure system setup the obvious choice.

Problems With Windows XP

- Windows XP allows two primary account types: **administrator** and **limited**. The term **limited** has negative connotations and may not appeal to users.
- All accounts created during the initial setup are automatically given **administrator** privileges .
- The interface does not encourage users to login to the system using a **limited** account.

Our Design

- Our interface guides the user to create a minimal number of **administrator** accounts and to make the rest of the accounts **limited** accounts, which we refer to using the more neutral term **user** accounts . It also encourages the user to login to the system with a **user** account instead of an **administrator** one.
- We moved the assignment of account types to the setup process. This is more intuitive than making the user search for this functionality later.



User Study

- We divided the participants into two groups. One group was tested on our enhanced interface and the other group, the control group, was tested on an interface that simulated current Windows XP functionality.
- All participants asked to set up a computer for a fictitious family of four. The scenario described the level of computer expertise of each family member and how each hoped to use the computer.

Findings

- Participants using our enhanced interface were more likely limit the number of **administrator** accounts.
- Our enhanced login interface, which places **users** and **administrators** in separate categories with **users** listed on top with bigger icons, may encourage people not to login as an **administrator** for day-to-day tasks.
- The study revealed that all of the participants understood that administrators have more power than normal users but only a few could explicitly describe the tasks that only an administrator can perform.

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