The Problem:
Alzheimer’s Disease
Alzheimer’s disease...
...Is a degenerative dementia.
...Affects over 5 million Americans.
...Begins with seemingly-benign memory loss.
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...Is a degenerative dementia.
...Affects over 5 million Americans.
...Begins with seemingly-benign memory loss.
MindScout alleviates two key issues of Alzheimer’s disease:
1. Carepartners are challenged to constantly engage the Alzheimer’s patient with tasks and reminders.
2. Carepartners’ attention is overextended by answering the patients’ frequently-repeated questions.

Our Solution:
A Tool for Independence
MindScout...
...Is a tool to enhance patient independence.
...Is not a replacement for a carepartner.
...Eases the burden of Alzheimer’s disease.
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Features
Functional
- Automates reminders about daily activities
- Hears and answers a patient’s most frequent questions
Convenient
- Handheld device
- Worn around the house
- Always on
- Speech input provides ease of use
- Customizable interface
- Appropriate audiovisual cues

Device Specifications
- Seamless, easy-to-use custom software allows both voice and text input.
- Hardware offers a large screen, a sensitive microphone, and the processing power to run voice recognition software.
- Runs Microsoft Windows XP
- Uses Dragon NaturallySpeaking voice recognition

Hardware Development
- VIA mini-ITX mainboard
- 1 GHz x86 processor
- 4 GB IDE flash drive
- 7” 800x680 touch monitor
- Directional microphone
- USB keyboard included

Software Development
- Programmed with Microsoft Visual Studio .NET
- Code written in C#
- NET framework provides simple high-level APIs for:
  - Multithreading
  - Windowing
  - Voice-recognition text input

Design Process
- Researched Alzheimer’s disease and current products
- Interacted with carepartners and support groups
- Brainstormed device ideas
- Narrowed device ideas to four
- Selected single device

The F.W. Olin SCOPE Team
Front row, left to right: Kristen Donen (ECE), Alison Lee (E:Computing), Faculty Advisor Steve Schiffman, Laura Stupin (E:Bioengineering), Susan Tse (Physics).