Overview

Nowadays, the market of portable devices is growing rapidly. Among the huge market of various gadgets, user interface is one of the key elements which directly determine a product’s competitiveness.

The objective of this project is to deliver usability, simplicity and instinctive graphic designs in the Graphical User Interface with the support from additional input components on a smart-phone.

Approach

Background: A QWERTY layout of alphabets and other functional buttons does have the comparative advantage over an input device with 12 keys regarding the speed of text or data input. However, traditional use of buttons usually covers a considerably large portion of the front face in this case. Recent development implements a graphical keyboard on touch screens, yet it could occupy as much as half of the screen, which is towards the side of being unfavorable for a clean and user-friendly user interface.

Hardware: By installing an additional touch panel to the primary touch sensitive screen for user input, obstruction to the contents displayed could be minimized, featuring:
- Gesture controls
- Characters input
- Precise cursor control
- Sliding ability

Software: A user interface with touch scrolling function could make significant improvement on the area usable on the screen by reducing the number of scroll bars used. The use of simple and intuitive icon designs could also save screen space from displaying icon names.

The Graphical User Interface

Hardware and software

YCTEK uP/2440 S-1431 ARM9 development board,
WindowsCE 5.0, Microsoft Visual Studio Professional 2005, .NET Compact Framework 2.0, Adobe Illustrator