

# Second Foundation, Inc.

## *Representative Project Summaries*



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### Firmware, WAP and Handhelds

- **Created a custom developed application** that enables **wireless phones** to search online inventory utilizing the **Unwired Planet micro-browser** and **HDML programming** language. In addition, developed web pages designed specifically for **Palm Pilot** and other micro-browser based devices.
- For a **pen-based tablet**, running Windows CE 2.11 on **Hitachi SH-4 7750** implemented the following system components in **OEM Adaptation Layer** and/or as separate **user-mode drivers** -
  - System power management
  - Hi-speed bi-directional ECP interface for data synchronization
  - PCMCIA ATA flash disk storage
  - Non-volatile registry storage
  - Battery control
  - LCD backlight control
  - Real-time clock alarm
  - Various custom hardware interfaces
- **Developed firmware for handling IR** to pass Remote Control commands into Cyrix processor running **Windows CE**. Worked on Keyboard driver to map Remote Control command keys. Also developed IrDA SIRdrive.
- **CES ( car navigation system )** - Worked on improving the performance of the navigation and positioning system. This included debugging the drivers and the applications to fix timing problems associated with the synchronizing the sensor and GPS data. Also developed various tools to help in problem analysis, e.g. logging utilities, etc. The environment was Windows CE, C, Windbg.
- Developed an application for **Palm PC**, thru which a doctor could store the prescription and send it to a pharmacy or take a print out. This application was developed using Visual C++ in **Windows CE environment**. This application required the use of **Windows CE SDK and APIs**.
- Used **WAP simulator** from **Phone.com** to develop **WAP applications** for **hand-held devices**. These applications were developed to explore **XML and WAP**. Also developed network management application to control software, using WAP .
- Developed WAP based Security Server solution **handheld synchronization** engine. It consists of **WTP (Wireless Transaction Protocol)** and **WTLS (Wireless Transport Layer Security)** layers to provide over the air security for synchronizations. This included performing **Impact Analysis** for WTP and WTLS layers for Server side and Re-engineering of WTP and WTLS layers for WIPER, which included coding and testing of both WTP and WTLS layers
- **Developed HTML-WML and XML-WML filter for hand-held devices**, which was designed as a pluggable module. All users visiting a website were redirected to this filter, which then read the site content and converted it into WML data. Intelligent caching techniques were utilized to speed up the conversion / transfer. These included a web crawler to pre-fetch data based on a predictive algorithm.

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