

# Second Foundation, Inc.

## *Representative Project Summaries*



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### Unix Kernel, Device Drivers and Systems Software

#### Kernel

- **Kernel sustenance** for multiple major UNIX workstation / server manufacturers. Fielded bug requests / escalations from customers. Fixed bugs in kernel, device drivers, commands and libraries. Generated patches and shipped them to customers.
- Third party compatibility **QA of new SMP compliant SVR4.2 releases** for major UNIX server manufacturer. The customer already had a test bed where it was doing its own functional and load stress testing of the OS and hardware. However no real applications were being tested on the OS.

Worked with customer to establish a typical profile of applications that would be deployed on the server. Convinced other software manufacturers to join the customer's ISV program. Generated overall systems test plan. Obtained QA suites (usually in a very preliminary form) from the manufacturers. Significantly modified and enhanced the test suites and automated them for "push button" regression testing.

#### Device Drivers / STREAMS

- **Device driver development / enhancement** for major **SCSI** and network adapter /controller manufacturer. Developed both HBA and device-level drivers for various cards / devices / adapters. Ported the above drivers to 64 bit platforms.
- Performance Analysis of **TCP/IP protocol stacks on SVR4** for major network appliance manufacturer. Identification of

bottlenecks vis-à-vis specific features provided by customer, e.g. IP multicasting. Suggested / implemented architectural changes / enhancements to the stacks and drivers for the above.

#### Systems Software

- Development of **Network Management System** on Solaris for major switch manufacturer, including X/Motif based GUI. The software made extensive use of IPC (shared memory, message queues, semaphores) and multithreading (Solaris threads). Integrated software with HP OpenView including the GUI and handling of Events / Traps / Alarms.
- **Porting / QA of RDBMS** components and tools across multiple UNIX platforms, including 32-64 bit porting. Debugging of ported code. Identification of whether problem encountered were global (i.e. across all platforms) or platform-specific (i.e. specific to one or more platforms), and bug fixing and testing of the code.

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