



SAMSUNG



ORGANIZATION:

Samsung Electronics Co., Ltd. is a multinational company manufacturing electronics, semiconductors, telecommunications equipment, memory chips, liquid crystal displays, mobile phones and monitors. Today Samsung employs over 309,630 people in 74 countries.



INDUSTRY:

Consumer electronics and semiconductors



COUNTRY:

South Korea



We have worked with Samsung EL. for more than 10 years, developing several compilers for different hardware platforms and other SDK components (assemblers, linkers, simulators).

We began working on the compiler at a time when the processor only existed on paper. By the time the first samples appeared, we already had a prototype compiler ready, and we finished

the whole SDK by the time the hardware was released.

This approach allowed Samsung to bring its new processors to market as quickly as possible.

OUR PROJECTS WITH SAMSUNG:

Compiler development for embedded systems (and optimization)

Full SDK creation for custom Customer chip. Includes porting of our own compiler (UCC), porting assembler/linker/librarian and debugger. IDE creation from scratch.

Technologies: C/C++; Microsoft Visual Studio; Win32 API; STL; COM; GNU GDB; GNU BinUtils; JIT Compilation; BCGLib; Boost library; Yacc, Bison.

Operating System development for Smart Cards

Architecture creation of smartcard operating system (JavaCard standard), following development, optimization and testing. Payment systems and access systems applets creation.

Technologies: C/C++, Java, Perl, OpenSSL, Microsoft Visual Studio, Keil μ Vision, NetBeans.

Flash translation layer development for SSDs

Creation and implementation of patent free algorithms for Flash translation layer of NAND memory devices. Aggressive testing, performance optimization.

Technologies: C/C++, the target platform - ARM, physical principles - NAND Flash, NAND Flash Emulator.

ASIC IP blocks development for data compression on the fly

Patent free, database oriented, compression algorithm creation and its Verilog implementation in IP block format for ASIC integration. Testing on FPGA. Performance optimization.

Technologies: The system is developed in Verilog. Debugging was performed on the FPGA of the Altera STRATIX-IV family, the target platform is specialized ASIC.

* — AstroSoft is the parent company of Grovety.Inc.



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