

Enea DSP Net

AREA OF COMPETENCES: Embedded Systems and Microelectronics
INDUSTRY: Telco

CHALLENGE

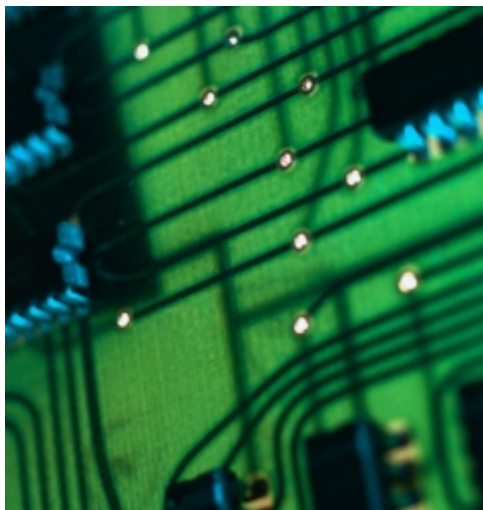
ENEAA

Enea acquired a DSP Net stack compatible with TCP/IP that will be integrated together with their real time system operating OSEck dedicated to Dspeed platform. They need qualified human resources that will be involved in improvement and optimization process required by stack integration into DSP.

Our people were challenged to integrate and make the new stack compatible with other Enea soft product, re-design and re-implement the DSP Net stack and test the new product quality.

SOLUTION

Together with Enea R&D team we developed a plan to assemble a team of experienced embedded software engineers with various expertises like driver and firmware development and RTOS knowledge. The new organization group exists only in Romania structure, this project has been assigned to the Romanian team.



Collaborating with Enea, our people managed to re-design and re-implement the DSP Net stack and testing the new product quality by following several tasks:

- Integrating security module IPSEC, IKE that will be compatible with clients requirements on the market;
- Redesign and re-implement the layer between DSP Net stack and operating system's (OSEck) low level ETHERNET drivers;
- Design and implement automatic testing system to guarantee quality of product;
- Adding VLAN, support networking stack;
- Conducting automatic test framework for the networking stack (e.g. TTCP, TCP/UDP, ICMP);
- Up-dated OSEck SFK Support for DSP Net application.

During this project our people were especially challenged to work on the major task of adding IPv6 support.

The technologies that we used were:

- Hardware: Freescale Starcore Family, Texas Instruments c64x+ Family.
- Software: Code Warrior IDE, Code Composer.

For this assignment our people used the latest crypting version of OpenSSL being integrated in worldwide community of volunteers that use the Internet to communicate, plan, and develop the OpenSSL toolkit and its related documentation. We also used and integrated HW-specific, highly optimized, crypto libraries.