SPIRIT DSP
Embedded Voice Experience

Russian Caller ID

Constant growth of Russian economy and consumer markets encourages telecom manufacturers to actively push to sell their corded and cordless phones in Russia. During the last 2 years, annual growth for the DECT market was 250%-300%, the current market reaching about 3 mln DECT phones and still growing.

The growth potential is conditioned by several factors:

- constant increase of PSTN subscriber base (1.5 mln new subscribers annually);
- most subscribers use 2-3 parallel phones on one line;
- large quantities of outdated phones which need to be replaced;
- the growing usage of GSM standard (DECT is the home-use analogue of GSM);
- diversification of terminals and improvement of equipment;
- price decrease.

Due to the maturity of the market, Caller ID feature now becomes more demanded by the customers.

Technically the Caller ID for Russian telephone lines has certain points that differ from European/Asian/American Caller ID: multifrequency signal detector, a signal consisting of a combination of any two of the six frequencies is needed. SPIRIT, having the knowledge of Russian telephony standards, is ready to deliver the right solution.

Russian market of wireless telephony

	2001	2002	2003	2004
Others	5	4	6	5
900 Mhz	15	12	9	5
30-40 Mhz	60	52	45	25
DECT	20	32	40	65

■ DECT   □ 30-40 Mhz   ■ 900 Mhz   □ Others

Platforms

ARM7; Philips Vega XXX DECT basebands.

Features

- Support of the Russian proprietary network standard for caller identification.
- Caller ID is supplied for the CPE side (Client Side). Support for the Local Exchange (Central Office side) is provided as an additional option.
- Direct interface with PCM 8KHz sampled data. Both sample-by-sample and block-based processing supported.
- Allows for adjusting carrier thresholds, signal levels, etc.
- Supplied with a simple wrapper class to make integration easier and more feasible
- Allows user to disable certain features at link time, thus reducing the code size

Performance

Specification	Value
Signalling frequencies	700, 900, 1100, 1300, 1500 and 1700 Hz
Acceptable levels	-6.5…-36.5 dBF (can be configured)
Acceptable twist	+/-6…+/- 12 dB (can be configured)
Minimum signal duration	40 ms (can be configured)
CID request frequency	500 Hz (can be configured)
CID request level	-6.5 dBF (can be configured)

Resource Requirements (Vega XS)

Peak MIPS	Instance Size (KBytes)	Code + Const Memory (KBytes)
2.5	0.72	7.50

Availability

SPIRIT's Russian Caller ID is available in the following forms:
- object code for ARM7TDMI
- object code for Philips VEGA line of DECT basebands

SPIRIT delivers embedded voice and communication products and consulting services to the world's leading telecommunication equipment and semiconductor suppliers, as well as collaboration software vendors.

SPIRIT's clients include Agere, Atmel, Ericsson, Furuno, HTC, Hyundai, JRC, Kyocera, LG, Macromedia, NEC, Nortel Networks, Oracle, Panasonic, Philips, Samsung, Siemens, Tadiran, Texas Instruments, and Toshiba, among over 200+ other communication OEMs.

Contacts