NOTE to produce for international research project

NOTE Xperi will be manufacturing circuit cards for the ”ALICE” project, which is one of the recently approved experiments at CERN’s new accelerator under construction in Switzerland. ”ALICE” is a cooperative project involving 80 different institutions from around the world, including Lund University.

The purpose of the experiment is to study nuclear media under extreme conditions, and to recreate the conditions that prevailed 1 microsecond before the origin of the universe in the Big Bang. The project will increase our understanding of what happened at the start of the Universe, and of what is happening right now.
Lund University is involved in the largest subsystem in ”ALICE”. It consists of a 100 m3 gas detector for recording charged particles in three dimensions.

”We are extremely pleased with the confidence that Lund University has shown in us. This is an order that we landed in international competition for a high-tech product,” says Magnus Persson, sales manager for NOTE Xperi. ”This order imposes extremely heavy demands on our production and on our company, demands that we definitely feel that we can meet,” concludes Magnus.

”We have set extremely strict requirements in terms of quality and reliability in this procurement, since this equipment cannot be repaired or maintained once it has been installed in the experiment,” reports Lund University Professor Hans-Åke Gustafsson. ”The most important selection criterion has thus been quality per krona spent. We weighed all the facts carefully before making our decision. In their documentation, NOTE Xperi clearly demonstrated that they could guarantee the high levels of quality and reliability that we sought. Their completion of other similar projects also played a part in our choice of supplier. We are convinced that NOTE will carry out this project for us in a satisfactory manner, and we are looking forward to a successful cooperative effort,” concludes Hans-Åke.

For more information
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About the NOTE Group
NOTE is one of Sweden’s leading manufacturers of electronics, with over 30 years’ experience in the industry. We offer near-to-market production through ems-ALLIANCETM - a global network of electronics manufacturers with partners in Brazil, China, India, Italy and the USA.

The Group has a total of roughly 800 employees. In Sweden we are divided

into six production facilities/Centers of Excellence and NOTE Lab/sales offices. In Europe we have a plant in Lithuania, plus operations in Central Europe that are administered from our office in Gdansk, Poland.

About CERN
ALICE is one of four experiments approved for CERN's new LHC (Large Hadron Collider) accelerator, which is under construction. The accelerator is scheduled to enter service in the spring of 2007.
ALICE is a cooperative project involving some 80 different institutions from around the world, including the Dept. of Experimental High-Energy Physics in Lund. Roughly 1000 people are involved in the project, which will have a total cost of about MSEK 800.

The purpose of the experiment is to study nuclear materials under extreme high-temperature and high-density conditions. Under these conditions we expect to be able to recreate the conditions that prevailed about 1 microsecond after the origin of the universe in the Big Bang by colliding heavy atomic nuclei with one another at extremely high energies. The information that we derive by analyzing these collisions will contribute not only to our understanding of what went on at the start of the universe, but also of what is happening at present.

The circuit cards are key to reading and processing the data gathered by the large TPC detector. Each FEC will contain 128 readout channels, and the number of readout channels will total roughly 500,000. After assembly and testing, the cards will be installed in the detector at the LHC accelerator. Once they have been installed it will be extremely difficult to access them for repairs, etc. This imposes enormously heavy requirements in terms of operational reliability, which means that the cards must be assembled and tested in such a way that their continuous operation can be guaranteed over a period of roughly 10 years.