STANDARD IN SAFE HANDS

PXI only got to where it is today because of the Systems Alliance, the custodians of the standard which have given it its universal acceptance. **Tim Fryer** spoke its president Loofie Gutterman about the role of the PXISA.

Beyond his role as president of the PXI Systems Alliance (PXISA), Loofie Gutterman is also president of Geotest Marvin Test Systems, one of seven sponsor members of the Alliance. Gutterman explained how Geotest was one of a number of companies looking for a cohesive solution to emerge in industry.

It all started in 1998 with a meeting in San Diego at which the PXI Systems Alliance was formed. The idea was take the PCI bus as the base, but the PC was not an integration-friendly platform. It was missing a lot of important ingredients, like instrument synchronisation, ruggedness and maintainability.

"If you looked at the market before 1998," said Gutterman, "Geotest had its own proprietary architecture called GTXI. NI had its own proprietary architecture called SCXI. There were a lot of companies trying to come out with the solution and base it on other standards. There were also custom solutions using proprietary buses, which were successful for a while, but then failed. So, at a time when everyone was doing different things, companies were looking for a standard they could piggy-back on and this was the origin of PXI."

PXI was actually invented the year before by National Instruments, but it realised that it was going to be a long road to travel if it was to go it alone. Gutterman put it in perspective: "Today, 16 years later, we can now say that PXI has everything. Ten years ago, five years after the PXISA started, PXI probably reached the critical mass where you can address the majority of applications with PXI only. That took 50 companies. For one company to come up with the necessary breadth of products to make PXI a viable platform would have taken too much energy, money and human resources. That is why the others died - you can't make a viable architecture on your own. So while National Instruments came up with PXI initially, it realised that as an NI proprietary architecture it would fare as badly as all the rest of the proprietary architectures."

Geotest joined the Alliance six months after its formation. Gutterman said: "There was nothing out there that really made sense for us before PXI. It was a great opportunity."

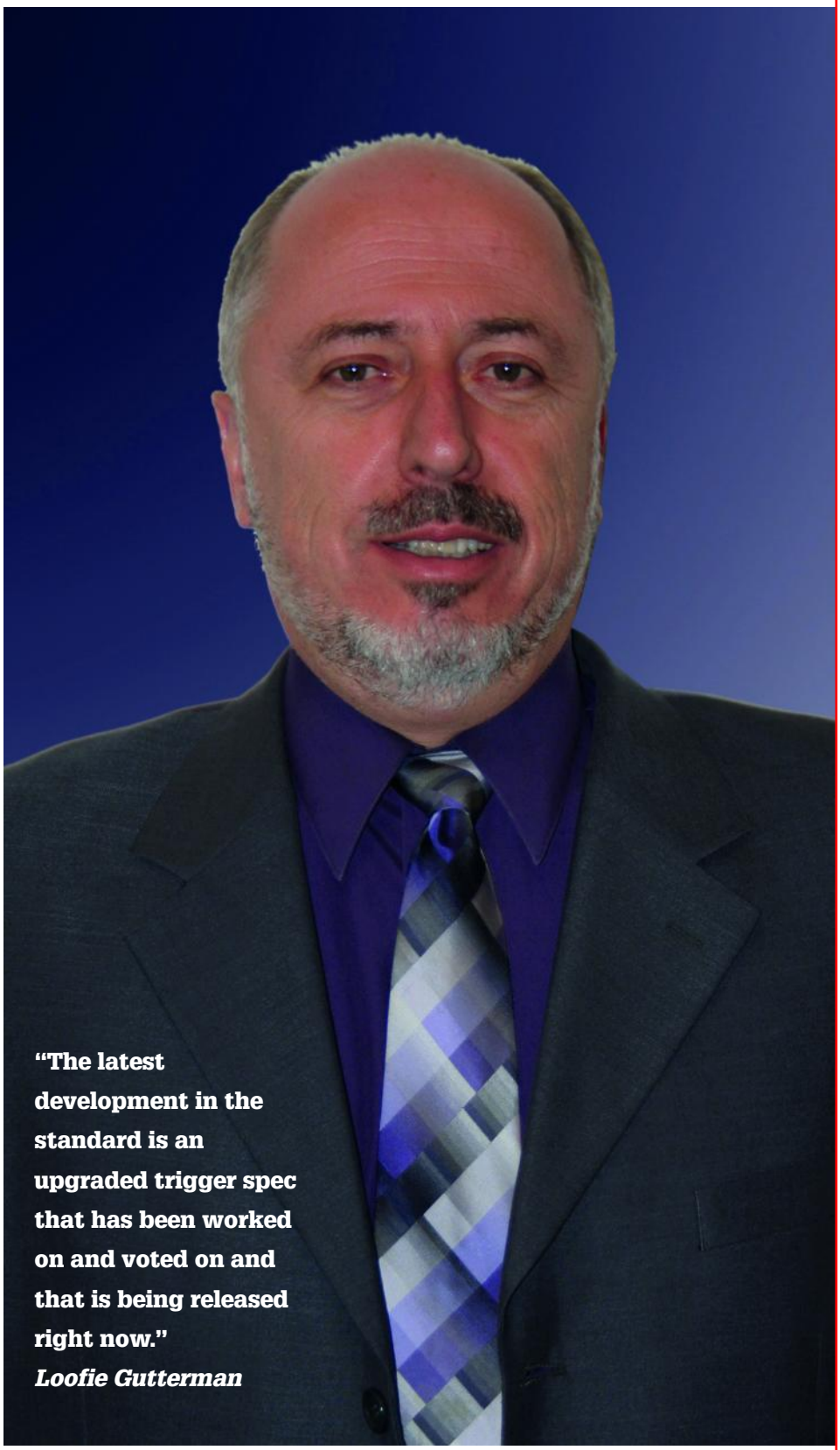
PXISA guides sector growth It appears to be an opportunity that has been made the most of by many, given that PXI revenues are predicted to grow to more than $1billion by 2017. However, it would not have been able to make this progress without the stewardship of the PXISA. "The Alliance is there to promote the standard and make sure that it remains viable," claimed Gutterman. "Some people say 'if it ain't broke, then don't fix it', but the danger is that it starts to become obsolete very quickly. So from the start there were improvements to PXI over the early years. Then we introduced PXI Express, which increased the bandwidth. It doesn't mean that a solution needs to be strictly PXI Express, but if you have applications where you need high bandwidth, then PXI Express is the solution for you. Hybrid chassis allows you to use either or – you can put either PXI or Express in the same slot. That is one thing about the Alliance – making sure we have interoperability between vendors, backwards compatibility is important." On this last point, PXI cards from 15 years ago can still be used in the most current PXI chassis.

There is no UK or European branch of the PXISA, but that is because of the global nature of the industry and the standard, rather than there being any US bias. The sponsor members, who are all part of the board of directors, chart the direction of PXISA. Four of these sponsor companies are US based (Agilent, Geotest, National Instruments and Teradyne), two are from Europe (Aeroflex and Pickering, both from the UK) and is one from Asia (Adlink in Taiwan) and that

As highlighted in the New Electronics Roundtable (see pages 4 to 6), there appears to be a lack of knowledge about the PXI platform amongst design engineers. There are plenty of white papers and technical articles on the Systems Alliance website – www.pxisa.org. Another option would be to come and talk to vendors and integrators at the PXI Show (see p16/17), being held on 5 June 2013 at Silverstone.

ratio is broadly reflected through the membership. Gutterman added: "The nice thing about PXISA, unlike other standards, is that any small company can join for $500 and be part of it as an Associate Member. New companies are joining all the time, some are integrators. There is benefit for joining the Alliance for users – you get to know what is going on and you can have your say in helping to shape the future of the standard.

Standard developments "The latest development in the standard is an upgraded trigger spec that has been worked on and voted on and that is being released right now," said Gutterman. "So development is a continuous process. We are not stagnant – we are always looking for ways to expand the capabilities of PXI and keep it viable. We're also looking to extend the markets – the reason we came up with Express was because we had a lot of applications with high bandwidth that we had a tough time dealing with it just by using PXI. So that is what we are looking at – how we can support the market, where are the shortfalls of PXI, if any, and then finding ways to improve on it. Today, I think we can cover just about any application except, perhaps, the very high end of microwave," he concluded, "but that is really the only area where PXI doesn't have a solution yet – and that's not because of the technical difficulty."



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