SARPA ASSOCIATION
PROFIBUS & PROFINET
NEWSLETTER
February 2009

50 Million PROFIBUS Target for 2012

PI is now confident that by 2012, 50 million PROFIBUS devices will be installed. The prediction by Jörg Freitag was made during a major press conference held at the SPS/IPC/Drives fair in Nuremberg, November 2008. Freitag also reported on developments such as the enhancement of PROFINET's performance in line networks when small data telegrams are being transmitted. This often occurs in motion control and fast IO applications and is a key segment of the industrial market.
Other topics included the 10th anniversary of PROFIsafe, and a number of key introductions including a PROFIsafe starter kit.

Enhancing PROFINET in Line Networks

PI experts are pushing the limits of Ethernet to enhance the performance of PROFINET for the kind of short frame transmissions typically found in motion control and fast IO applications. The solution is fully compatible with the IEEE802.3 Ethernet specification and does not jeopardise the openness of PROFINET or compatibility with existing PROFINET devices and networks.
The step mainly targets the communication needs of drives and fast IO in linear networks and will become an optional 'performance' extra that can be deployed when needed. It means that the performance of PROFINET comfortably exceeds that of all other Industrial Ethernet solutions right across the application spectrum.
A demonstration at the recent SPS/IPC/Drives fair in Nuremberg Germany showed how the solution works. Two methodologies are employed: the first - Dynamic Frame Packing (DFP) - allows the nodes in a line network to exchange frames that become shorter and shorter as they pass through subsequent nodes. The second - Fast Forwarding – ensures a short transit time near the technical limit of Ethernet, without compromising any of the openness of TCP/IP or PROFINET as deployed today.

PI Chairman Jörg Freitag said: 'Complete compatibility with today's PROFINET devices is retained and existing devices will be fully interoperable with devices using the new 'fast' mechanisms. From the user's perspective nothing changes.'
PROFINET is already the most powerful Industrial Ethernet solution in the tree and branch networks commonly found in today's automation systems.
About 1.1 million PROFINET devices were installed by the end of 2007.

PROFIsafe News

80% Growth in 2008

PI expects PROFIsafe's installed base to grow by 80% in 2008. At the end of 2007 there were 410,000 devices installed. The success of PROFIsafe is based on three paradigm shifts that bring significant cost savings:

1. It is possible to implement safety functions on PROFIBUS or PROFINET in almost identical ways. Independent safety-related hardware wiring can be eliminated.
2. PROFIsafe pioneered the so-called 'black channel' principle which allows secure transmission from end point to end point via proprietary backplane buses as well as PROFIBUS and PROFINET.
3. It enables the use of integrated safety functions in devices such as drives, thereby increasing flexibility during manufacturing as a result of parameterisable safety. It also achieves higher availability based on immediate startup after an emergency stop or when a warning occurs.

PROFIsafe is the only safety technology covering discrete, process and motion control. It is already well established in the all these markets.