Press information

7th November 2011

Postcards from the future

Alan Begg, SKF Senior Vice President of Group Technology Development explains that technologies move at dramatically different speeds but, whatever the pace, it's the concerns of today that will drive the changes of tomorrow

It's not easy to predict 25 years ahead because technologies do not all move at an equally steady pace. Sometimes they barely move at all because what has been established is hard to improve upon, such as the technological innovation upon which our business was built. If SKF's founder Sven Wingqvist took a trip forward in time to 2011 and examined one of our self-aligning ball bearings, he would still recognise it as the revolutionary component that he created way back in 1907. Of course, there have been enhancements, such as the addition of electronic functionality and reductions in weight and friction, but the technology is essentially the same as it was in 1907.

However, where mechanical engineering generally progresses at a steady pace, electronic technology tends to move much faster and is therefore much harder to predict. As a child of the 1960s, a time when space travel and trans atlantic jet travel caught everyone's imagination, I imagined that aerospace would now be much further ahead than it is, but I could not have predicted the rise of mobile phones, GPS and the whole communications revolution that continues to drive change in every corner of our lives.

Though the speed of change varies between technologies, it is always driven by needs.

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SKF Group Headquarters
S-415 50 Gothenburg, Sweden
Tel +46 (0)31 337 10 00 Fax +46 (0)31 337 28 32 www.skf.com

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The economic need to reduce energy consumption, coupled with our shared human need to believe we are tackling the sustainability issue seriously, means that energy efficiency will remain a key driver in any technological development over the next 25 years. I also believe that electronics and communications technology will develop in ways we cannot imagine, becoming an ever more dominant part of our lives. My prediction is that these two factors will converge upon the more sedate world of mechanical technology, resulting in some powerful innovations.

Just imagine, instead of sending a bearing off to a windmill and hoping it will be installed and used optimally, you specify an 'intelligent' bearing that sends a message every time something happens to it – an electronic 'postcard', if you will. The first postcard you receive from the bearing might say, "I'm joining the following parts to make a windmill." Later, you might receive other messages, perhaps needing action: "I'm wrongly installed on the shaft," reports the bearing, or "the maximum load is not what the installer told you!" The messages could continue throughout the life of the bearing, enabling constant monitoring and truly maximising the efficiency of the operation. "I can keep going for another three months," the bearing might report towards the end of its life, "please organise my replacement."

All of this could be achievable via wireless electronics and, considering the improvements to efficiency and energy management that technology like this would offer, it seems likely that we will develop these kinds of products over the next 25 years. At the very least, my prediction falls in line with what we know about technological development, which is that change is dictated not simply by what is achievable now, but by what we want and need; what we want and need today is energy efficiency and sustainability.

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About SKF
SKF is a leading global supplier of bearings, seals, mechatronics, lubrication systems and services which include technical support, maintenance and reliability services, engineering consulting and training. SKF is represented in more than 130 countries and has 15,000 distributor locations worldwide. Annual sales in 2010 were SEK 61,029 million and the number of employees was 44,742.

ISSUED ON BEHALF OF: SKF South Africa (Pty) Ltd
P O Box 13157, Witfield, 1467
Tel: 011 821 3500 / Fax: 011 821 3501

Samantha Joubert – MarComm Assistant - SKF South Africa
Email: samantha.joubert@skf.com
www.skf.co.za

BY: Sonia Laverick
Laverick Media Communications cc
Tel: 083 310 4491 / Fax: 086 671 6836
lavmedia@iafrica.com / www.laverickmedia.co.za