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It's just happened ...

World Robotics 2005

UNECE/IFR* issues its 2005 World Robotics survey

The world market for industrial robots is projected to increase from 95,400 units in 2004 to 121,000 in 2008, a yearly average of 6.1%.



Although demand for robots within the automotive industry in Europe, North America and Japan may decrease, there is still growing demand in all developing markets in the world. Installations in general industry – especially the packaging, food, rubber and plastics, and machinery industry – will grow all over the world as a result of technical developments.

More robots per human worker in Europe than in the US

In 2004, Japan had the highest robot density with 329 robot installations per 10,000 employed in the manufacturing industry. It is followed by Germany with a robot density of 162. It is interesting to note that robot density in Europe is about 25% higher than in the United States.

\$3.6 billion service robots for professional use in 2004

Underwater systems accounted for 21% of the total number of service robots for professional use installed up to the end of 2004. Thereafter followed cleaning robots and laboratory robots with 14% each, and construction and demolition robots with 13%. Medical robots and mobile robot platforms for general use accounted for 11% each. Field robots, e.g. milking robots and forestry robots, had a share of nearly

9% and defence, rescue and security applications 5%.

Household robots from vacuum cleaners to humanoids

So far, service robots for personal and private use are mainly in the areas of domestic (household) robots, which include vacuum cleaning and lawn-mowing robots, and entertainment robots, including toy and hobby robots. Sales of lawn-mowing robots have started to take off very strongly, with sales in excess of 46,000 units, and should continue to boom. The market potential is very large. Vacuum cleaning robots were introduced on the market at the end of 2001. The market expanded rapidly in 2002-2004 and at least one million units have been sold.

Of the 1.2 million domestic household robots that were in use at end 2004, about 550,000 were installed in 2004. It is projected that sales of all types of domestic robots (vacuum cleaning, lawn-mowing, window cleaning, humanoids, and other types) in the period 2005-2008 could reach some 4.5 million units with an estimated value of \$3 billion.



Robots for fun – a growing market

The market for entertainment and leisure robots, which includes toy robots, is forecast at about 2.5 million units, most of which, of course, are very low cost. The sales value is estimated at over \$4.4 billion. ♦

Question of the week

to Kevin Ostby, Chairman of Industrial Robot Suppliers (IRS)



Until now, robots were used mainly to manufacture cars. What will happen in the coming years?

All manufacturing requires robotic automation to maintain and improve competitiveness in the global manufacturing world. Ever more exacting demands in terms of product quality can only be satisfied by automation. So even countries and regions with inexpensive labour available are seeing strong growth in the use of robotics for manufacturing, including Mexico, Brazil, China, India, and Republic of Korea and East European countries.

In highly industrialized countries like the US, Japan, Canada and Germany, there are actually forecasts for labour shortages in the future, as “baby boomers” retire from the workforce, and younger workers desire more skilled jobs than manual labour. This coming labour shortage will drive the implementation of robotic automation into all manufacturing areas.

New trends will expand robotics into industries such as food manufacturing, pharmaceuticals, tyre and rubber, plastics, and glass, in addition to continued growth in the automotive industry. Robotics will also be increasingly used in small and medium-sized enterprises.

Whenever and wherever a work piece is handled or moved, the chances are that robots can be used to make the operation more efficient and effective, while also improving quality. ♦

* International Federation of Robotics

Nature for Water: ecosystem services

The loss of services derived from ecosystems becomes a significant barrier to achieving the Millennium Development Goals to reduce poverty, hunger and disease. Such services include purification and detoxification of water, pest and disease control, mitigation of floods, erosion control, nitrogen fixation and regulation of water supply in addition to the aesthetic and recreational roles of forests, wetlands and other natural ecosystems. This is one of the key messages from the recently published Millennium Ecosystem Assessment.

What are these services?

In Switzerland, for example, forests that protect against avalanches are valued at some 2.3 to 2.8 billion €/year and are a substitute for built



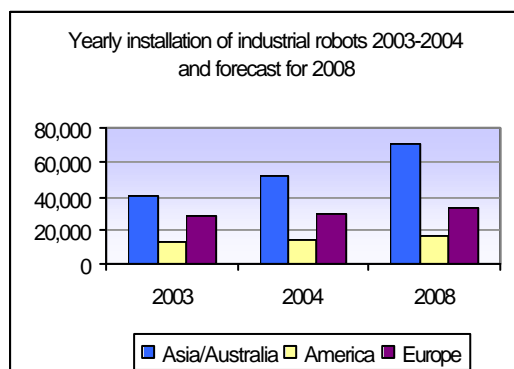
infrastructures. The high quality groundwater from forested catchment areas, used as a source of drinking water, is estimated to save Switzerland some €52 million per year, and 0.77 €/m³ in Germany. Innovative tools to protect these services include public payment schemes. Instead of constructing a filtration plant (\$6-8 billion construction costs with yearly operating costs of \$300-500 million),

Coming up soon ...

Good market surveillance practices

The UNECE Working Party on Regulatory Cooperation and Standardization Policies (WP.6) will hold its annual session in Geneva on 24-26 October, which will include an open International Forum on Market Surveillance and Consumer Protection on 24 and 25 October. This Forum will help governments to obtain first hand information regarding national approaches and best

Fact and figures



the New York city authorities decided to invest \$1.5 billion over 10 years in improvements of farm and forestry practices to reduce water pollution in



the catchments that provide 90% of the water consumed. Today, the NY drinking water is reported to be of superior quality and it meets State and Federal health-related standards.

Code of practice

On 10-11 October, a seminar on environmental services and financing for the protection and sustainable use of ecosystems brought together Governments, non-governmental environmental organizations, the business community and researchers to develop over the next 6 months a common code of practice to protect ecosystems and apply new tools, such as payments for ecosystem services. Training in Southeast Europe and the countries in Eastern Europe, the Caucasus and Central Asia will supplement the code. Pilot projects on the implementation of the new paradigm – Nature for water – are envisaged in trans-boundary river basins.

For more information contact Rainer Enderlein (rainer.enderlein@unece.org) or Francesca Bernardini (francesca.bernardini@unece.org). ♦

The TIR system goes East



Over 60 countries in Europe, Central Asia, the Middle East and North Africa, are already members of the UNECE administered TIR system, which every year facilitates around 3 million international transports under TIR Carnets. With a view to enhancing the implementation of the TIR Convention as well as to encourage further countries to join the Convention, a sub-regional seminar on the TIR system was held in Beijing (China) on 22-23 September, organized by UNECE together with UNESCAP and the Chinese Ministry of Communication, for member and observer countries of the Shanghai Cooperation Organization (SCO).

The TIR system provides important value for Asian countries. It facilitates bilateral Customs transit development between neighbouring countries but the success of the TIR system relies on effective and strict implementation, including adequate Customs control measures to combat fraud and implementation of risk management systems. The meeting agreed that countries in the region would benefit from additional capacity building and training, including partnership building with existing TIR countries.

For more information contact Poul Hansen (poul.hansen@unece.org) ♦

practices in market surveillance. During the past few years, the role of market surveillance, particularly in countries in transition, has increased. This is the result of a shift in emphasis away from controlling the safety of goods and services at the pre-market stage to post-market surveillance – after products are already available on the market.

For more information visit

http://www.unece.org/trade/ctied/wp6/other_events/fora.htm

October

- 18-20 Working Party on Inland Water Transport
- 17-20 Working Party on Agricultural Quality Standards
- 17-19 Working Party on Road Transport
- 18-19 Seminar on Transboundary Water Management at the North-Eastern Border of the European Union (Sterdyn, Poland)

For further information please contact:

Information Service,
UN Economic Commission for Europe (UNECE)
CH - 1211 Geneva 10, Switzerland

Tel: +41(0)22 917 44 44

Fax: +41(0)22 917 05 05

E-mail: info.ece@unece.org

Website: <http://www.unece.org>

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