

Building a Future for Students in Textiles

The Industry at Present

- Clothing and Textiles industry contributes around £10 billion to the UK economy every year and employs 380,000 people.
- We have a very strong design and technical workforce.
- For smaller companies UK manufacturing can still turn around garments much quicker than the far east.
- Technical textiles or Flexible materials as they are known is one of the fastest growth areas in the industry.
- Companies like ASDA are now bringing some of their manufacturing back to the UK.

Skills Shortages

- Due to an ageing workforce we need to start recruiting fresh new talent
- The UK produces too many designers with approximately 6000 students leaving university every year with a fashion/textiles related degree
- Skills needed include Pattern, Fabric and Garment Technologists as well as new recruits who are multi skilled within many areas

14-19 Agenda

- The 14-19 Specialist Diploma is intended to offer young people an alternative to traditional study or Vocational Qualifications.
- Developed by QCA and working with sector skills councils and employers the diplomas offer students the chance to gain a real understanding of the practical skills and knowledge required to work in the industry.



Which Diplomas

- Creative & Media Diploma Starting 2008
 - Fashion Design
 - Textiles Design
- Manufacturing Diploma Starting 2009
 - Leather Manufacturing
 - Technical Textiles
 - Footwear, apparel and leather goods
- Retail Diploma Starting 2010



Future of our Industry

- CAD/CAM is imperative in today's economic climate to keep businesses competitive and to save time and money
- It is imperative that students get the opportunity to see how design and pattern technology has been revolutionised by CAD/CAM systems



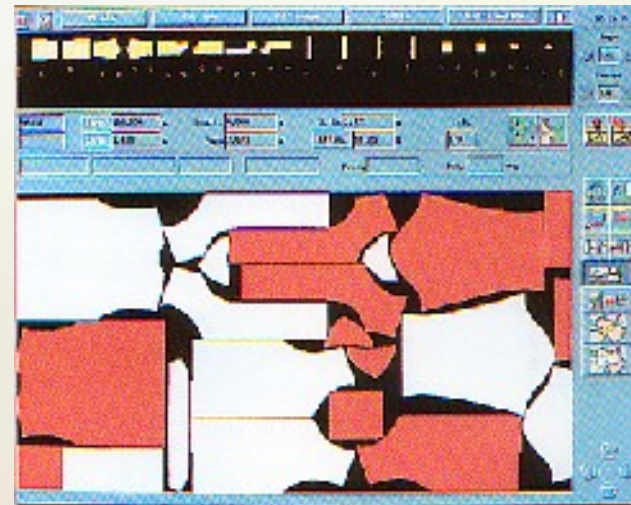
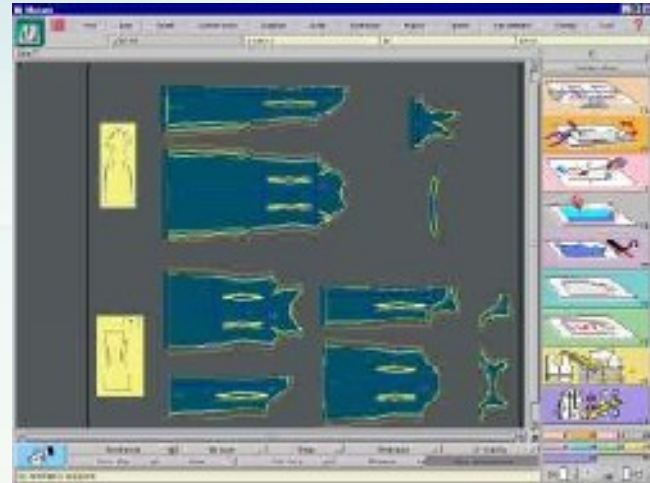
Images www.lectra.com

CAD/CAM

Pattern and Lay planning Systems are purchased by all mass manufacturers.

These systems are imperative in keeping the costs down when developing patterns.

More than often, patterns, grading and lay plans are created in the UK and then emailed across the world to the manufacturer.



Fitting Solutions

This software developed by Lectra, allows the patterns to be 3D mapped onto a virtual model to check style and fit.

120 fabrics characteristics have been installed in this powerful software to simulate perfectly the final fit of the product.

Fully manipulative this software then allows you to change the models features, the colour of the garment as well as be able to view the garment 360°.

Modaris 3D Fit enables you to save time and reduce product development costs by restricting the number of physical prototypes.



3D Body Scanning

- Individual blocks and patterns can now be created using sophisticated 3D CAD technology.
- The customer steps in to a booth where a 3D body scanner scans the body and takes more than 300,000 data points from the body and sends them to the computer.
- The computer generates an individual size chart which can be used to produce bespoke clothing which will fit perfectly every time.
- For companies which remote sell this would be an ideal way of manufacturing garments to fit an individual's needs, eliminating the risk of the customers incorrectly taking their own measurements.
- Levi tested a similar scanner in five of its major stores in the US during 2005. The customer enters the scanner; the scanner then interprets their individual body measurements and gives the customer a print out of the jeans in store which would be most suitable for their body shape.



Image www.intellifit.com

Future Man

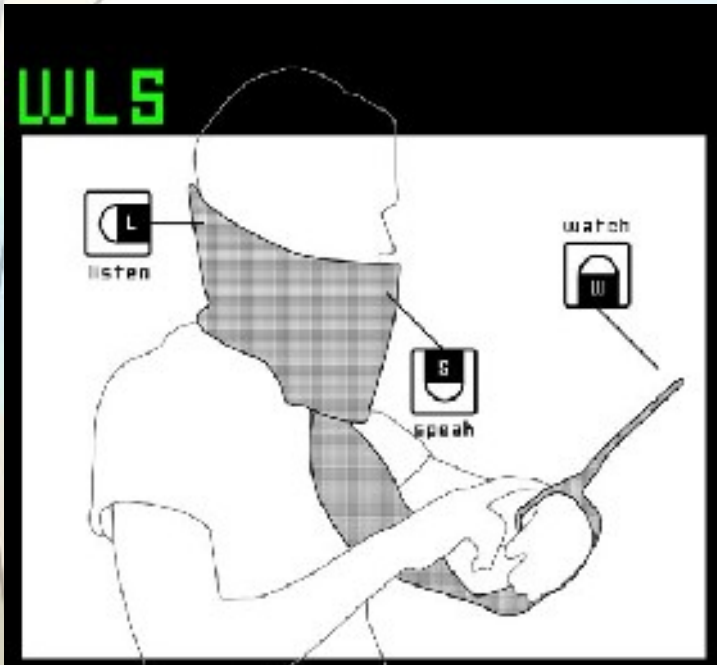


• In 1939 designer **Gilbert Rohde** predicted that the man of the next century, would be wearing a **Solosuit**

Technical Textiles

- Globally technical textiles is worth approximately £40 billion and accounts for 38% of all textiles fibres produced in the UK.

- These textiles are manufactured for their technical performance or functional properties rather than their aesthetic characteristics



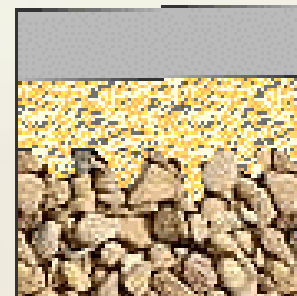
www.electronicshadow.com/mediacol/sceno/index.htm

www.speedo.co.uk

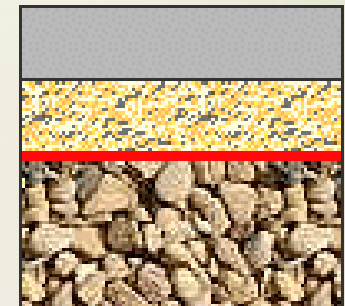
GEO-TECH

Geo-Textiles are permeable synthetic membranes used in conjunction with construction materials.

- Liquid filtration in landfill sites and Dam construction
- Erosion control and river defences
- Waterproof lining systems in tunnels, ponds and lakes



Bedding can settle into voids in sub-base



Geo-fabric stops bedding settling into sub-base

Automotive textiles



Kion Concept Car



www.johnsoncontrols.com

MEDI-TECH

The medical industry uses both woven and non-woven fabrics for numerous applications

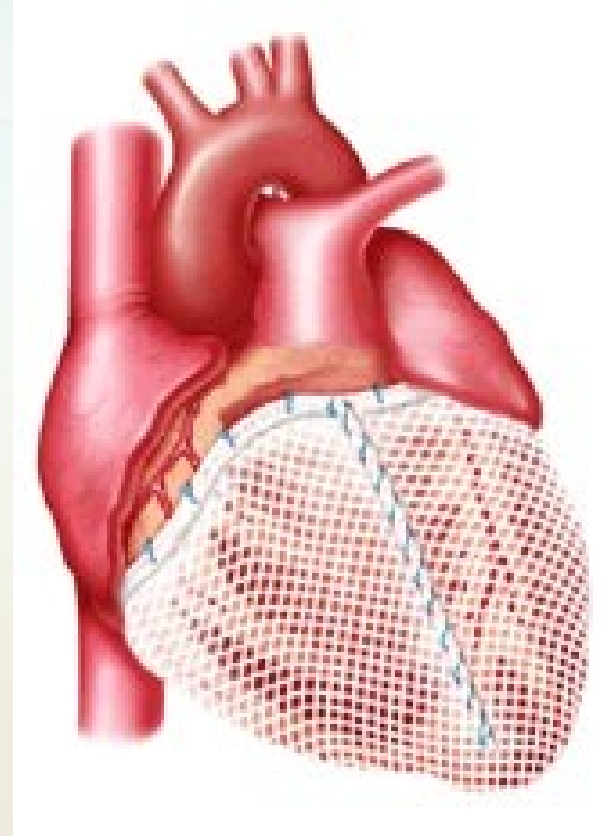
- *Cleaning: wipes, cotton wool, etc.*
- *Woundcare: woven, knit, non-woven, sterile packaging, etc.*
- *Protection: woven and non-woven gowns/drapes, medical mattresses, etc*
- *Artificial Arteries, knitted vascular grafts*

www.sulzervascutek.com



Cardiac Support Device

- **Warp Knit mesh bag used to treat enlargement of the heart**
- **The support device contains the heart allowing it to beat normally without stress**
- **The untwisted yarns disperse stress without cutting into the flesh**

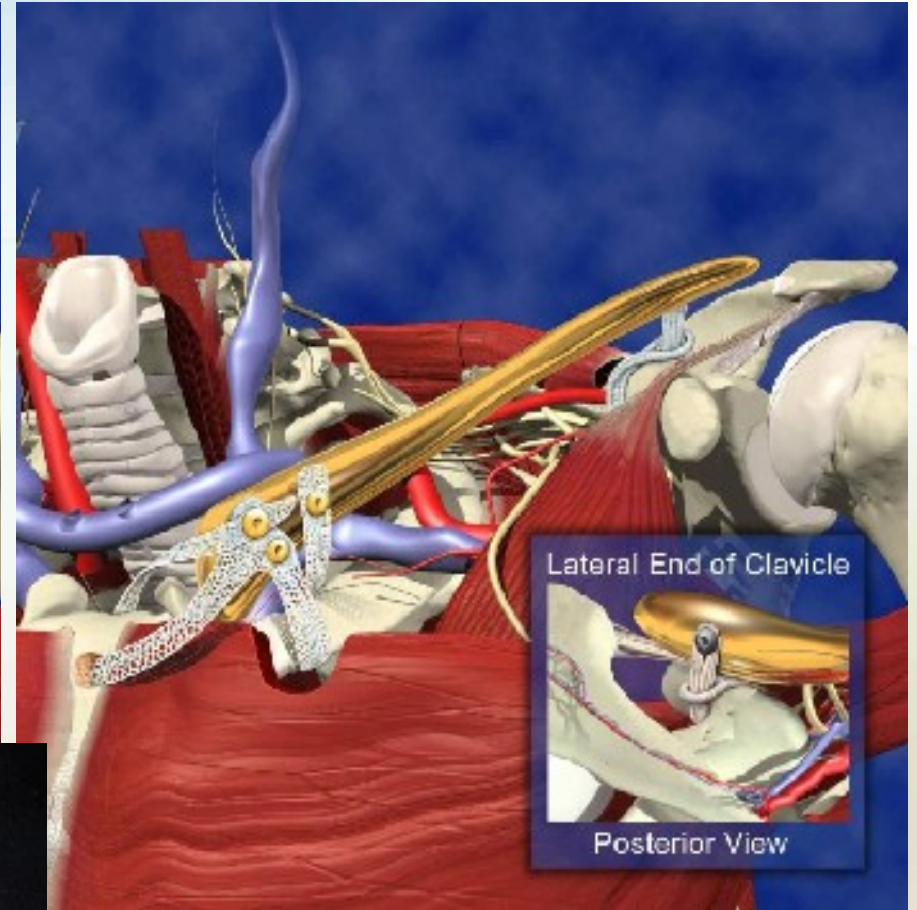
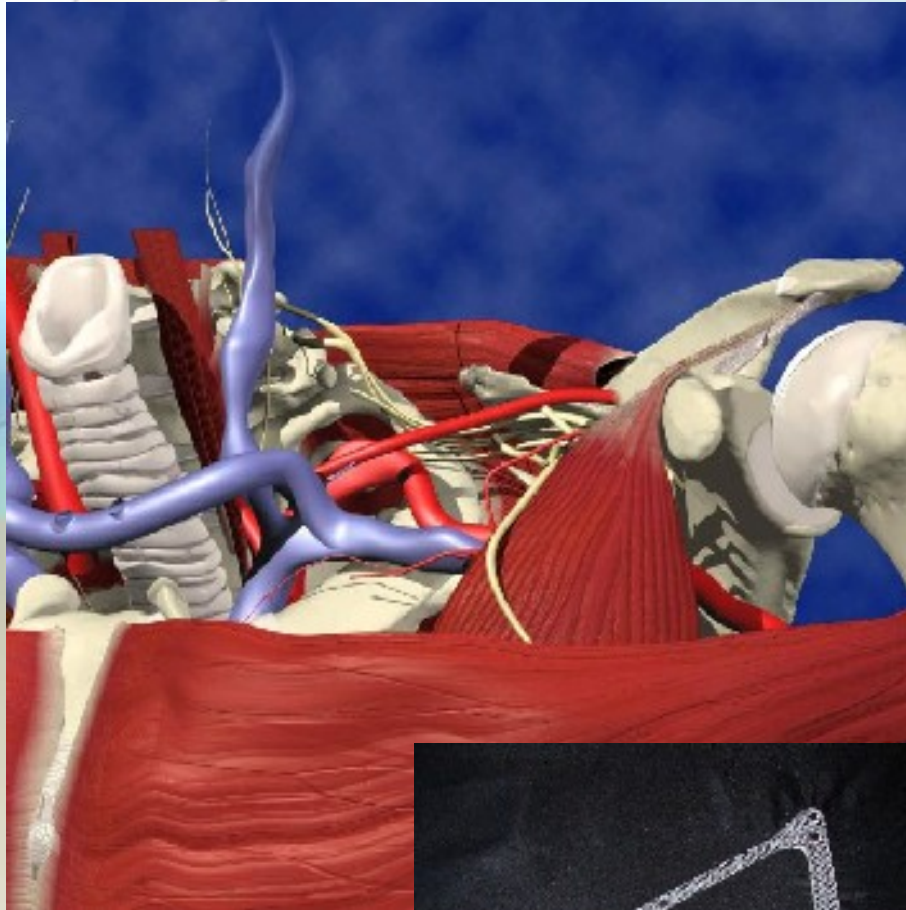


Embroidered Surgical Devices

- **Utilising CAD/CAM technology Ellis Developments specialise in surgical implants for many types of operations. The company Uses a dedicated CAD package and embroidery machines which would not look out of place in a garment factory.**



Embroidered Surgical Devices



Images: Ellis Developments Ltd

Combating MRSA

Toray Safe is a new range of Anti-Microbial products.

Combined with X-Static® pure silver yarn Toray's fabrics present enormous potential for the Health and Leisure markets.

Toray Safe products using the x-static® yarn have clinically shown elimination of 99.9% of bacteria in less than one hour of exposure including mrsa and vmrsa.

Natural, non-toxic, non-allergenic, these benign fabrics are permanent, anti-odour and anti-static.

Pyjamas made from these fabrics are undergoing clinical trials in a UK hospital in 2006.



Smart Armour

- **A Futuristic flexible fabric that instantly hardens into armour upon impact**
- **Lightweight and Bendable material known as d3o, can be worn under normal ski clothing**
- **Eliminates the use for bulky protective clothing usually worn by skiers and slalom races**



Shape-Memory Alloys



Corpo Nove of Florence

Cost at the moment for the prototype is around £2500

www.corponove.it

www.newscientist.com



Solar Powered Handbags

Solar Powered Charge

Electroluminescent fabric

Zip activates the switch

**Shuts itself down if the
wearer has forgot to close
the bag after 15 seconds.**



Image www.bbc.co.uk