



LEAPFROG CA

Coordination of multidisciplinary knowledge and Research Activities to support Leadership for European Apparel Production From Research along Original Guidelines

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With a turnover of 220 billion Euros and an overall workforce of 2.9 million employees in the enlarged EU, the textile and clothing industry is one of the longest and most complicated manufacturing chains, strongly dominated by SMEs. Over the past, textile and clothing manufacturing has been improved through many RTD projects and many others are currently ongoing at an international, national, and regional level. In order to withstand growing competition from low labor cost countries there is a need to gather and analyze this scattered knowledge in order to provide a holistic approach to solve common manufacturing problems and in the end reach rapid global manufacturing.

Leapfrog CA is an EU project which aims at creating a knowledge community through cost-effective coordination of ongoing Eureka, IMS, European, national, and regional research projects and networking of 37 key consortium representatives from 14 countries. The consortium gathers experts from academic and research institutes as well as textile/clothing industrial representatives, technology developers, and IT service providers.

These experts will systematically identify and review all emerging key knowledge areas and related application fields and perform a worldwide state-of-the-art survey and patent search. About 70 ongoing and finished, national and international research projects will be analyzed. All knowledge will be structured and collected in a knowledge data base made public to European garment and textile companies. Guidelines for the implementation of technology and best practices in the industry will be developed to ensure the dissemination of the research results.

On the other hand, current industrial needs, problems, and bottlenecks will be analyzed to identify gaps in

research and to develop an integrated roadmap for research activities in the next years. A virtual cooperation platform for the knowledge community will be developed and permanent groups of industrial and scientific experts will be established. The results of the project will be presented through public international conferences and national events.

In order to manage the huge amount of knowledge, four thematic areas have been defined:

1. Concepts for and analysis of the future Extended Smart Textile/Garment Organizations
2. Virtual - collaborative design/virtual prototyping for customized mass products
3. Innovative processes and new production, production control and quality paradigms in fabric manufacturing and preparation
4. New materials and processes supporting intelligent apparel manufacturing systems

The Fraunhofer IGD has gathered extensive knowledge in the area of 3D garment simulation systems in the last years and is thus participating in the Leapfrog CA project under the thematic area that aims at reviewing innovative garment design and prototyping tools through a combination of 2D CAD and 3D garment simulation systems. Proposed concepts for new design methodologies and user-friendly interfaces will be analyzed to encourage the efficient change of design culture from 2D to Virtual 3D.

Leapfrog CA started in summer 2004 and will finish in December 2006.

Point of Contact

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German Abstract

Leapfrog CA ist ein EU- Projekt, das es sich zum Ziel gesetzt hat, ein europäisches Wissenszentrum für die Schaffung und Bündelung von Technologien im Bereich Bekleidung und Textilien aufzubauen. An diesem Projekt sind 37 Partner aus 14 verschiedenen Ländern beteiligt, welche es sich zur Aufgabe gemacht haben, ca. 70 laufende und abgeschlossene, europäische und nationale Forschungsprojekte zu analysieren, sowie aktuelle Forschungsergebnisse zu sammeln und innerhalb einer Wissens-Datenbank zu strukturieren. Ein multidisziplinäres Forum identifiziert aktuelle Probleme der europäischen Textil- und Bekleidungsindustrie und stellt in regelmäßig stattfindenden Veranstaltungen existierende Lösungsansätze vor. Durch die Analyse der existierenden Technologien können Forschungslücken aufgedeckt und eine Roadmap für zukünftige Forschungsaktivitäten entwickelt werden, um hierdurch die Unternehmen in Europa im globalen Wettbewerb zu stärken.