

Advanced Textile and Garment Manufacturing Process Technology

Project number: RD/PR/007/06



Description

This project aims to design and develop an RFID-based system to support the automation in the textile and garment manufacturing process and to facilitate the capturing of data through different production points so as to reduce bottlenecks. The pilot run of the proposed system will be executed for a variety of applications including automated product recognition, raw material management, work-in-progress (WIP) management, and inventory management in the following areas:

- Dyeing, Printing and Finishing
- Textile and Garment Manufacturing

Advantages

This technology will enable the local textile and garment industry to reduce inventory levels, to cut waste, to improve their own manufacturing processes, and to improve business performance across the entire organisation. The automated manufacturing process allows better control, monitoring and management of the production process in a manufacturing plant. It will lead to an increase in efficiency and business opportunities, and to reinforce Hong Kong's leadership as a regional hub for the sourcing of garments.

Expected deliverables

1. An RFID-based system to support automation in textile and garment manufacturing process.
2. A requirement study report for the automated textile and garment manufacturing process infrastructure and pilot study.
3. Pilot implementation cases covering automated applications on different textile-related manufacturing processes with case study documentation.
4. A report on the findings of this study on the technology, challenges, implementation, and issues of the automatic data capture enabled textile and garment manufacturing processes automation. It will form a guide to design and develop an automated system for the textile and garment industry. The report will be produced for the purposes of keeping records, sharing experiences, and disseminating information.
5. A workshop for the dissemination of know-how about RFID to specific sectors of the textile and garment industry.

先進紡織品及 服裝製造流程技術

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內容

此項目旨在設計和開發一個基於射頻識別技術的系統，以之實現在紡織品和服裝製造過程中的自動化，和幫助企業在不同的生產點獲取數據，以減少瓶頸限制。此系統將被應用於不同的領域，包括自動產品識別、原料管理、在製品(WIP)管理和存貨管理，並且將在以下範疇進行先導研究：

- 洗染、印染和修整
- 紡織品和服裝製造業

優點

此技術將協助本地紡織品和服裝產業降低庫存水平、減少浪費、改進企業自身的生產流程，並最終改善企業在整個行業中的業績。通過相應的射頻識別標籤所攜帶的資訊，可以自動選擇生產流水線和調整專用工作指示，來幫助企業減少生產失誤。此項目也將大大增強本地紡織工業的行業效率，為其創造商業機會和增加服務多樣性，從而增強香港作為地區服裝供應中心的領導地位。

預期成果

1. 一個基於射頻識別技術，支援紡織和服裝企業生產流程自動化的系統。
2. 一份基於射頻識別技術的紡織和服裝企業生產流程自動化系統的要求報告及先導報告。
3. 先導實施案例及案例文本。這些案例將涵蓋射頻識別技術在不同紡織品的生產流程中的應用。
4. 研究成果的專業報告。報告將包括此項目所採用的射頻識別技術、所面臨的挑戰及技術的執行等相關事項。報告所記錄的這些事項對於設計和開發紡織和服裝工業射頻識別系統，將是有益的引導。該研究報告用於保存研究資料記錄、共用經驗及推廣相關資訊。
5. 研討會和培訓。主要用於推廣介紹紡織和服裝行業特定領域的RFID技術。