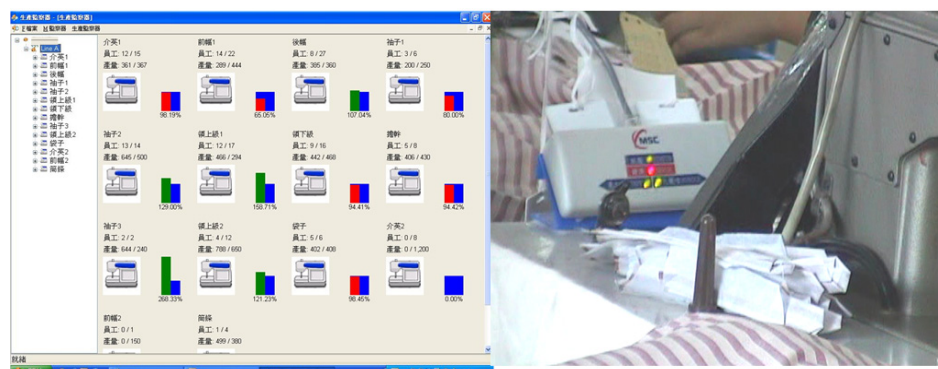


## The RFID WIP System provided by MSC, powered by Microsoft's advanced platform, has become the most effective production management solution today

In today's world where technologies and information are becoming an important accelerator in Lean Manufacturing. MSC System enables the whole Textiles and Clothing Industry to work with a breakthrough on MSC ERP system. The industry's internal operating efficiencies can be lifted while their ability to communicate with overseas clients can also be improved, resulting in enhanced production and quality. The whole industry is gaining full benefits from the latest RFID Technology.



## Strong technology support to let the textiles & clothing industry understand more about their businesses and obtain better results

The Enterprise Resources Management Planning System provided (ERP) by MSC Limited can effectively link up human resources, business flows and information in the textiles & clothing industry, allowing the whole industry to make timely and correct decisions. Meanwhile, regarding the management of "products at the workplace", MSC also has an application system – RFID WIP Management System – in place. This latest technology offers a complete solution on areas ranging from the management of workplace data to the provision of a platform for management analysis, facilitating the enterprises in managing critical business information in a safe and sound way as well as running some complex business applications.

This solution runs on Microsoft®SQLServer™2005 – a cutting-edge integrated application platform from Microsoft available to the marketplace at the end of 2005. With the support from this strong partner, MSC should be able to offer enormous benefits to the enterprises while enhancing their investment software value. Amongst all Hong Kong-based partners of Microsoft, MSC is the one who can provide the most powerful platform for the textiles & clothing industry. With the MSC RFID WIP System on hand, an enterprise can understand its own business information better, with the system's innovative ability to provide real-time reports and data-analysis tools. In fact, the system solution provided by MSC is suitable for all vertically- or horizontally-integrated textiles or garment businesses. They will be presented great business opportunities with regard to the database, business flows and application system life-cycle management markets. The MSC ERP and MSC RFID WIP Systems will complement each other well, ensuring enhance productivity of staff, improved synergies and a better coordination amongst the duties of different teams and posts in an enterprise. This will bring better business values to all the enterprise users.

## The MSC RFID (WIP Management) System

Nowadays, the majority of Hong Kong's garment manufacturers employ the use of "**Bundle Production Model**" for producing their merchandise. One of the disadvantages of this kind of production model is that it will bring about increases in semi-finished or finished goods. Besides, the complicated production process is always too long, jeopardizing the factories'

ability in coming up with a good forecast for production cycles as well as its ability in control and reacting to changes. The traditional production management model looks set to be more and more vulnerable against the surging market demand as the marketplace now requires quick actions and really short delivery times. Fortunately, the MSC RRID WIP Management System is now in place as an IT solution for this kind of problems. Simply speaking, this system adds the RFID technology into the different segments of the garment-manufacturing process, allowing the enterprise to trace the progress of the processing works in each production line. This is then very different to the normal means of management the production lines. In fact, the MSC RFID Management (Production Monitoring) System will never be subject to the hindrance in tracing “**REAL-TIME**” production data – something always seen in other places where there are scattered production workplaces and complicated processes.



Speed is one of the advantages this system offers – The MSC RFID WIP System can provide “Real-Time Information” regarding the production line. A good management means requires balanced production and endeavors cohesive efforts. It does not really look for a maximal personal production level. The timing of processing semi-finished goods between one workstep and another is actually very critical. Therefore, any delay there will directly affect the other processes. The appointment of duties to different staff and the set-up of machineries are all based on smooth production workflows. In the meantime, an enterprise’s management staff usually sets limits on the semi-finished goods, as there should be short distances between different production workflows while there is also a need for synchronized production. While the quantity of semi-finished goods is usually low in this sense, they do need to be presented as useful data while being standardized and computerized.

Some Hong Kong-funded garment manufacturers have already used the MSC RFID WIP System and the outcome is promising. One of them is “Tim Mei”, which is based in Dongguan. When asked about the tips of successfully using such a system, an official from the manufacturer has pointed out the importance of balanced workflows. To achieve that, the enterprise first needs a set of well-planned production flows and related human resources plot. Then, with the help of the MSC System, its production-line project team can then perform process analysis and timeframe research, well before the production kicks off. The whole production plan, which includes the times for different workflows, forecasts on daily production levels and machinery-equipment setup, can then be kicked in as inputs to the system. At the same time, these data numbers will also be the production targets for the Cutting Department. This production means can also lower the inventory level of cut piece. The management has also stressed that the MSC RFID WIP System is able to present the data of production workflows in a good form while also digitalizing it. This way, the problems will then be more clear-cut. Simply with some monitoring works over the computer screens will enable the management staff to keep an eye on everything. Even a severe ad-hoc production problem can be solved in a very short time. Therefore, problems will not pile up. They can also revise their tactical plans anytime during the process if needed, so that the problem of imbalance in the production line can be solved, with productivity enhanced and costs lowered. Overall, the

The RFID technology has a broad range of uses while its presence is found everywhere, such as further integration towards the goal of a digital family, Internet, wireless network and equipment, the development of e-passports, security monitoring, digital entertainment, car navigation, digital containers, tracing of medical wastes, clearance of airport luggage, etc. Business opportunities are enormous in these areas. Nevertheless, our MSC consultants do reckon that garment enterprises are set to reap even bigger benefits from the use of the RFID technology while the spotlights should fall on the provision of real-time data of the whole supply chain. In fact, RFID can bring a huge impact to the management of the whole supply chain, as it allows the recording of some basic workflows to the most complex analysis works. There are thousands of trillions of real-time data being involved here.

Looking at the entire **Integrated Supply Chain**, the RFID System allows for much better transparency in each ring of the supply chain (different supply-chain items in different geographical areas). Goods (including workflows) can be traced, in a real-time manner, from anywhere along the supply chain. From a deeper and broader point of view along the supply chain, the whole integration can be separated into four layers: more accurate information integration, more effective synchronization, more effective synergy workflows as well as more complete supply-chain integration. RFID is set to bring about innovative changes to each of those layers, allowing real-time supply-chain integration to be materialized.

The screenshot displays the 'Production Management' software interface. The left pane shows a 'Task List' (工作清單) with a tree view of tasks and a list of workers (王國君, 鄭丹丹, 張漢英, 陳芳英, 唐小蘭, 員工) with their assigned tasks and progress percentages. The right pane shows a video feed of a worker operating a sewing machine.

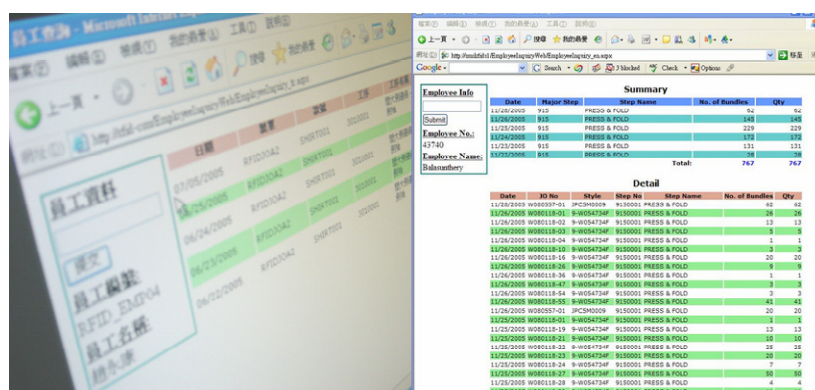
| Worker | Task | Progress (%) |
|--------|------|--------------|
| 王國君    | 縫合1  | 產量: 62 / 80  |
| 鄭丹丹    | 縫合1  | 產量: 53 / 80  |
| 張漢英    | 縫合1  | 產量: 54 / 80  |
| 陳芳英    | 縫合1  | 產量: 69 / 80  |
| 唐小蘭    | 縫合1  | 產量: 27 / 80  |
| 員工     | 縫合1  | 產量: 0 / 80   |



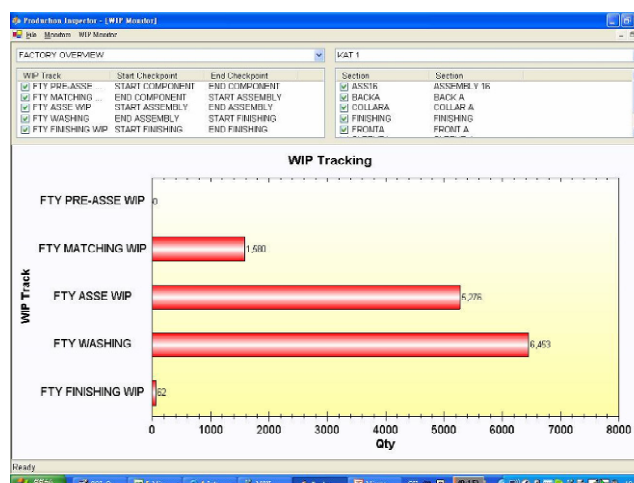


MSC consultants have pointed out that the RFID technology will lead to the integration of a better supply-chain environment. This way, all participants in the supply chain will be presented a brand-new business-operating mode, so that the enterprises can achieve their targets more effectively.

**Real-time data** – RFID does not need the help of anyone for identification of tags. The card-readers can directly read the relevant data (regarding the staff cards and workflow cards) contained in the smartcards from the radio frequency tags. Some card-readers can read data out from one to two hundred tags in a nick of time, and this is a thousand times quicker than the traditional scanners. A great deal of labour resources (those manual works) can then be saved up. Let's take the management of production line as an example and imagine a supply-chain environment with a well-integrated system comprising RFID WIP and ERP, due to a high degree of information sharing, information regarding the progresses of workflows will be stored as information flows in the entire system. This way, all participants and management staff will then have real-time access to them. The stored information can be used for salary calculation, thus further streamlining human resources and minimizing the risks of errors.



Next, the RFID System can effectively forge the strengthening of supply-chain (including the ERP System) peripherals. Under this highly-coordinated and integrated environment, information flows, together with goods flows and fund flows, will make business operation more flexible. In fact, the key is more closely and more effectively linking up information flows with all other related businesses. The RFID Technology, with the help of a trans-department (or sometimes even trans-partner) ERP system, can help the users trace and obtain some first-hand information through upstream suppliers and manufacturers as well as downstream distributors and retailers. Like so, inventory levels can be lowered and hence a lower level of current information. Materials and products can also be stored in a more accurate and efficient way.



To be a genuine provider of real-time supply-chain management: The entire global supply-chain integration is just like a large-scaled virtual enterprise or organization. Every member of the enterprise will be able to share information, synchronize plans and use well-coordinated business process flows. Everyone is up against the complex, ever-changing market as a team. Eventually, more efficient, speedy and flexible business ideas can be presented to the clients while benefits will be reaped.



Through the use of the MSC RFID WIP Integrated Information System Platform, the whole production line and workflows can be shown to others clearly. Each supply-chain participant will also be able to see through the situation of the entire supply chain. Quicker and more accurate reactions to changes in the supply chain can then be facilitated.

### A Brand-new Business Operating Environment

The World Trade Organization conference, which was held in Hong Kong in December 2005, concerned about how to expand the global trades of products. But special considerations were also given to the whole textiles industry. In fact, all participants will discover that there is no immediate winner or loser in Asia, even after the cancellation of the quota system. Experts forecast that most countries in Asia will continue to see, in a long run, still-burgeoning operations in the textiles and garment factories on their lands. Well into 2006, the whole textiles industry in Asia will see more challenges and each will strive for survival. In Hong Kong, the garment industry will see a quicker development while the entire market has also entered a new age. There are a few characteristics associated with this higher level of business activities:

- (1) There will more interaction between individual enterprises, which are responsible for expenditure on equipment, and the whole garment industry, which will be associated with more synchronized development. Currently, the industry mostly comprises operations across different countries. Areas which are being covered include raw materials for manufacturing textiles, semi-finished goods (including yarn), various major and minor materials for manufacturing textiles, costumes, accessories – which combine to form the entire supply-chain network of the textiles industry. In fact, the management staff of most large-scaled enterprises would like to have their factories set up in regions like the Pearl River Delta and the Yangtze River Delta for more complete economic support package. These regions do have more advanced operating environment while the different networks (including those regarding information, transport, water supply, electricity, etc) are all well placed for the sake of better production works. With an emerging China Mid-West Region, there should be enormous potential associated. This reflects a really urgent need for IT management systems for the garment industry, so that a better trans-nation resource allocation can be facilitated.
- (2) The garment industry is having its focus set on the growth of the overall market, with all software and hardware being enhanced. This has resulted in some Hong Kong enterprises with large scales, the emphasis of the enterprises' own cultural positioning and their brand images. In fact, most of these Hong Kong enterprises do have some hardware equipment that can match those of other big foreign textiles players.
- (3) There is a closer contact with the rest of the globe, in terms of the trading means. Meanwhile, electronic business is also on the move. In fact, enterprises are conducting their businesses in an ERP-to-ERP mode. Now, the garment industry is able to enjoy a

better sharing of information through various innovative technologies, hence some modern business models.

There is another set of information which needs a closer look – the first worldly report on “The Era of No Quota”, issued at the end of October 2005 by the International Labour Organization after an international textiles and apparels conference was held. The report points out that there are currently a total of 19 million people being employed in the whole textiles and apparels industry. Amongst them, those involved in the textiles industry were up 12% while those involved in the apparels industry were up 30%. Now, while endeavoring an upgrade in the overall quality of its own textiles and apparels segment, China has also increased its investments in Chinese Taiwan, Hong Kong and Macau. As a matter of fact, China’s combined investments to these regions already reached 15% of its total investments in the textiles industry. After the abortion of the quota system, the global textiles industry has experienced a series of changes. In Asia, countries like India and Cambodia have also imposed some stricter rules, so as to be more competitive. Bangladesh, The Philippines, Madagascar, Haiti, Sri Lanka, Tunisia, Morocco, Turkey and Romania have also followed the footsteps of Cambodia in implementing some “social responsibility” rules, so as to enhance their productivities. In this sense, there is a more urgent need for a more complete computer system in place as a management tool for the fellow industry players in Hong Kong.

A recent survey conducted by the CHINA INSTITUTE OF CITY COMPETITIVENESS at the end of 2005 shows that Hong Kong is ranked first amongst all Chinese cities, in respect of overall competitiveness, degree of internationalization. However, Xie Xiancheng, a vice president of the society, warned that Hong Kong Government should maintain its current open-door policy, so as to attract more funds. This way, Hong Kong’s current edges over other would be sustained. With regard to the garment industry, special attention should also be given to the development of whole market, such as the training of human talents, the enhancement of both software and hardware, the standardization of business and trade operations, the improvement of communication channels, the reasonable allocation of resources, the lowering of costs as well as the transformation of the current trading platform into a more comprehensive one which presents better information flows and building-up of brands. Meanwhile, one should also make use of the modern information technology to facilitate those functions that aim to combat the current problems in the tangible market, such as information enquiry, cross-location trading, etc. This will be good for recruiting new customers. In fact, only is one able to develop the most advanced and scientific management cultures, regarding market-operation management, can both the operators and customers achieve a “win-win” situation.