Productivity Measuring System
for Sri Lankan Plant of Noratel Group

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Registration No : MSIT/04/039

Index No : 05/10030

Dissertation submitted to the Faculty of Information Technology,
University of Moratuwa, Sri Lanka for the partial fulfilment of the requirements
of the Degree of MSc in Information Technology.

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September 2008
Declaration

I declare that this dissertation does not incorporate, without acknowledgement, any material previously submitted for a Degree or a Diploma in any University and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organization.

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Signature of Supervisor

Date :
Dedication

To my loving parents,
 whose lifelong ambition is to educate their children
to reach the pinnacle of education ….
Acknowledgement

It is my greatest pleasure to pay my sincere gratitude towards all those who supported me in numerous ways to complete this project successfully.

First of all I would like to express my gratitude to my supervisor Dr. Janaka Wijayanayake, the senior lecturer of the Department of Industrial Management, University of Kelaniya for his dedicated support and guidance given to make my project successful.

Then I should thank all the staff members of the Faculty of Information Technology of the University of Moratuwa who gave us complete knowledge on the subject for their guidance and comments given towards the project and for providing all the necessary facilities and support.

My appreciation should go to Dr. Shantha Jayalal – the senior lecturer, Department of Industrial Management, University of Kelaniya, for encouraging and motivating me to complete the project according to the deadlines.

Further, I would like to extend my sincere thanks and kind appreciation to all staff members and my colleagues who support me in various ways throughout the project to make it a success.

Finally, I would like to extend my special thanks to Mr. E.M.H.J. Edirisinghe – Director of the Computer Unit of the Wayamba University for English proofreading.
Abstract

Productivity is one of the major concerns in businesses that has to be measured and monitored, in order to meet manufacturing challenges and achieve a high standard of quality with superior results.

Noratel - Sri Lanka, under the Scandinavian based Noratel Holdings is an ISO certified company, which manufactures Toroidal transformers and chokes for a wide range of applications. Company is now facing fierce competition in the market and is becoming less competitive day by day. There are many factors around this result/outcome and organizational labour productivity is one of the key components. Non-availability of an effective labour productivity measuring system has been one of the key issues of the organization.

Labour component of the cost of production has been identified as the most sensitive portion to be evaluated in order to decrease the cost of production and to face the fierce competition successfully. Hence productivity based monthly incentive scheme was introduced. Shift wise daily production outputs including the timing for each and every operations of the production process were recorded and the recorded heavy data volume was input to the software application which was developed for measuring and monitoring the productivity.

Structured System Analysis and Design Methodology was used with the Rapid Application Development process model for developing the application. All the features that were required for entering data easily, fastly and accurately were implemented in the system. Further, data validation rules were implemented in all the areas where applicable in order to ensure the accuracy of the entered data and the system outputs. All the expected outputs were generated successfully through the software application and users were very much happy about the user friendliness of the system. Providing online information in multi-user environment was one of another important achievement.

Employees were rewarded based on their productivity and based on the predefined productivity benchmark values. After implementing the system, it was monitored that the productivity of production lines were gradually improving and monthly sales turnover also was gradually increasing while decreasing the cost of production. Graphically analyzing tool was a very much useful tool for monitoring trends of changes of productivity and making decisions.
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<td>BOM</td>
<td>Bill of Materials</td>
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<td>BSO</td>
<td>Business Solution Options</td>
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<tr>
<td>CD</td>
<td>Compact Disk</td>
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<td>Dept</td>
<td>Department</td>
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<td>DFD</td>
<td>Data Flow Diagrams</td>
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<td>DLL</td>
<td>Dynamic Link Library</td>
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<tr>
<td>E &amp; CR</td>
<td>Engineering &amp; Customer Relation</td>
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<td>ERP</td>
<td>Enterprise Resource Planning</td>
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<td>Human Resources</td>
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<td>LAN</td>
<td>Local Area Network</td>
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<td>LDS</td>
<td>Logical Data Structure</td>
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<td>MC</td>
<td>Machine</td>
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<td>Management Information Systems</td>
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<td>Purchase Order</td>
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<td>Production Process Development</td>
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<td>Prod</td>
<td>Production</td>
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<td>RAD</td>
<td>Rapid Application Development</td>
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<td>SDLC</td>
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