An Approach to Measure Software Maintenance and Support
As a Value Added Component of To-Day’s Business

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Abstract
There has been considerable investment by Dofasco in existing manufacturing process software. Also, it has been shown that software must evolve to continue to be useful, and thus enhancement/perfective maintenance work is a common activity in an industrial environment. Since software maintenance can consume as much as 70 % of the lifecycle costs of a software system, there is constant pressure from our internal clients to reduce maintenance costs. This proposal describes an approach of re-classifying maintenance activities to provide a measurement tool for clients and senior management, to see a true picture of efforts spent on “business support”, "retain benefits" and to obtain “new business benefits”.

1. Introduction
Dofasco is one of Canada’s largest fully integrated steel producers, serving customers throughout North America with high quality flat rolled steel from operations both in Canada and the US. Dofasco’s process automation department (PA) provides automation solutions directed primarily at productivity, quality, yield, and cost improvements, and support for the Manufacturing Processes.

Our Manufacturing Processes have for the most part, an excellent level of automation. This is the result of a long-term continuous improvement efforts, to keep our infrastructure up-to-date, by maintaining existing, adopting new technologies, and sustaining a competent automation resource base. Looking ahead to the next 2-5 years or more, the key drivers in manufacturing excellence are improvements in quality, yield, productivity, reliability, and responsiveness (reducing cycle time) while reducing costs and resources. Automation is a key enabler for these improvements and it will be important to sustain our continuous improvement strategy of exploiting automation for new value. There are many new opportunities

...to improve individual operations by integrating functions at individual processes; e.g. improve maintenance effectiveness by linking the maintenance program to the process control systems that manage the product and process; e.g. improve local decision making by providing real time decision support systems.

...There is a saying “ if you can not measure, you can not improve”. PA has used various tools to measure and track our efforts in various categories. Recently PA introduced a new web-based tool called WATTS (Work and Time Tracking System), and new common terms and definitions to ensure consistent use of WATTS throughout P.A.

2. WATTS System
The WATTS system provides: a means to track and manage changes/configuration to the various automation systems that PA supports; a standard means for time entry and reporting and better information to assist PA Management with resource planning and work package prioritization.

The new PA-wide terms and definitions include:

- New rules/criteria for determining whether an activity should be defined as an Automation Change Request (ACR) or an Automation Work Request (AWR), or a Project.
- New Activity Classifications: why are we working on the activity? E.g. to “support business unit”, or to “retain benefits” (activities related to “keep the systems running”) or “for new business benefits” (activities related to generating improved cost, quality, and productivity, etc.)

This talk presents a number of scenarios showing how the tool has helped to allocate PA resources to each business unit, including actual resources per activity type (retain benefits, new business benefits or support business unit).