



## Change Description Tracking Master Thesis

### Background

The software development today document each software change, version handle each software modification and save all freezes (baselines) of each software release. Despite having these fundamentals in place, each release documentation, contains numerous entries that are erroneous.

### Problem

The most severe problems, actually, don't origin from erroneous entered information in our systems, but instead the correct data disappears because of branching, because of changed (modules and product) configurations and because of reuse of same software in numerous different product variants.

### The Light in the tunnel

Since we; define the branching strategy that is used, do (most of) software tools development in-house and even could adjust the software development process, we could make the foundation of getting much more correct release documentation.

### Master Thesis Definition

The Master Thesis challenge, will be to define what preconditions that should be changed to get better off. The result should put changes against evaluation of their cost, as well as how correct the resulting documentation will be. What changes must be introduced in processes or tools. There do exist simple solutions to the problems like; have all changes for one variant checked-in on one branch and never branched-off, so the real quest will be to find a solution that are feasible to introduce in SEMC tools and/or SEMC process and/or SEMC branching strategies at lowest cost with highest benefit.

The primary focus for this thesis will be an investigation that requires in-depth understanding of current branching strategies, current used tools; CME, SDE, DeliveryWEB and ClearQuest and at last, also current used development process. For these tools, processes and strategies, we supplies unlimited knowledge. If a tool change is needed and is brought forward for testing its perfectly ok, but not in focus for this thesis.

Mentors will be: Andreas Göransson and Claes Israelsson. Planned start is spring 2006.