Automated Template System

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Introduction

- The Automated Template System enables managing & maintaining documentation standards in a company when using MS Word

- Provides flexibility with ease & consistency of use to enhance productivity & efficiency of users when generating different types of documents

- Speeds up producing documents with consistent and professional appearance across the company

- Dramatically cuts down on editing time for all users

Introduction

- Enables efficient professional technical editing with minimal time wasted on formatting and appearance

- Integrates easily with engineering & company processes and systems

- Overall system offers efficient, effective & consistent maintenance

- Default MS Word templates can be used to create standardized MS Word document layouts, or system of registered company document layouts

- Quality at the source – empower the users!

System Components
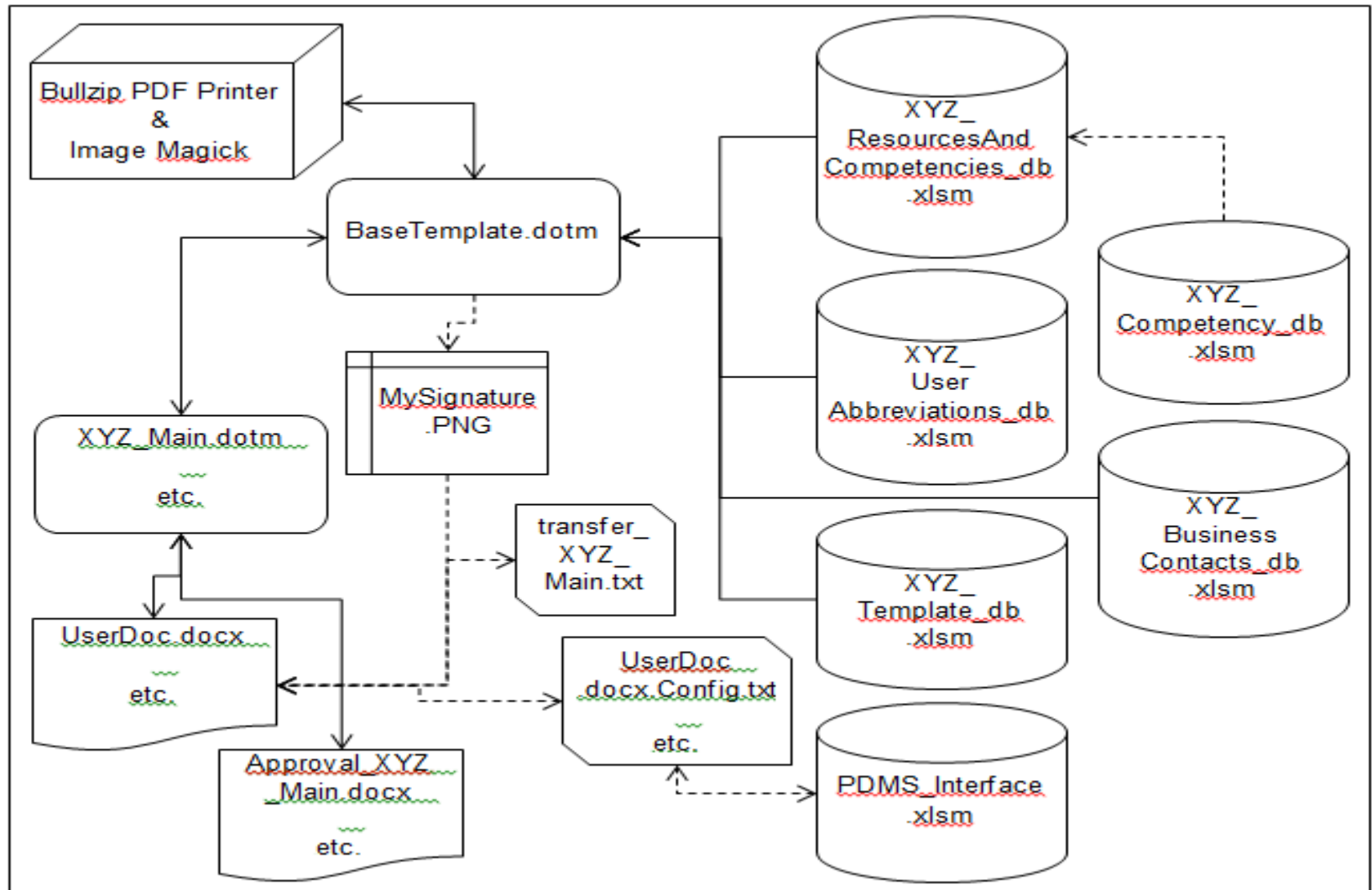
System Components

- MS Word Templates
  - Minimal default set of MS Word templates (*.dotx, *.dotm) that embodies company look & feel (face value), implement company documentation standard
  - Automation part consolidated into a totally generic MS Word base template that does not offer any face value
  - Default MS Word templates reference base template to gain access to automation functionality
- Template Database
  - Contains standardized abbreviations, case definitions for captions or headings, allowed style names, document type definitions, security classifications, etc.
  - Based on MS Excel
- Business Contacts Database
  - Contains list of business contacts, their designations and business addresses

System Components

- **User Abbreviations Database**
  - User-defined abbreviation definitions, not overwritten with Automated Template System updates
  - Based on MS Excel

- **Product Data Management System (PDMS) Interface**
  - Provides interfacing code to exchange and control documents' metadata or configuration data between a PDMS and the document itself
  - Indirect interface to the PDMS, used in an offline mode of operation
  - Example interfacing code resides in an Excel workbook
  - Can be used as the official document index or interfacing code integrated with company's PDMS

System Components

- Competency Database
  - Provides a comprehensive tool to manage resource competencies within a company (required in formal industry sectors)
  - Influences who may prepare, review and approve formal documents
  - No direct interface with the MS Word templates; creates a simplified database for use with the MS Word templates
  - Based on MS Excel
- Resources and Competencies Database
  - Provides list of approved resources, their competency levels & competency functions for specific project phases within specific competency areas
  - Based on MS Excel

System Components

- 3rd Party Applications
  - Image Magick (http://www.imagemagick.org)
    - Open source, free for use, distributed under Apache 2.0 licence
    - Used for creation of composite electronic signature image
  - Bullzip PDF Printer (http://www.bullzip.com)
    - Free for up to 10 users in a company
    - Optional installation
    - Provides ability to programmatically apply copy protection to PDF files
    - Enhances security of PDF files created by the signature utility
    - If not installed automatic creation of signed copy-protected PDF documents not available

Features

- Automated Template System Ribbon
  - Conveniently integrated with standard MS Word menu & ribbon system
  - Provides advanced Automated Template System functionalities at click of a button
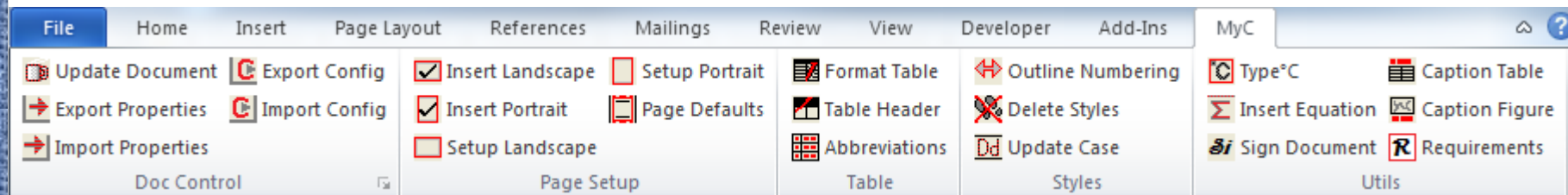
- Revised Styles Group on Home Ribbon
  - Similar to MS Word 2003's 'style-at-a-glance' informative user interface
  - List level control active when needed
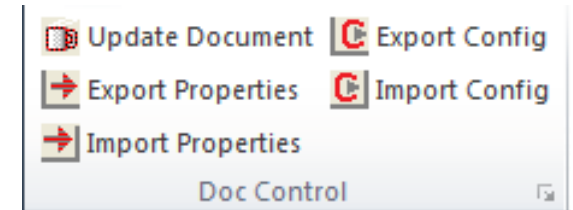 - Hides style options users should not use
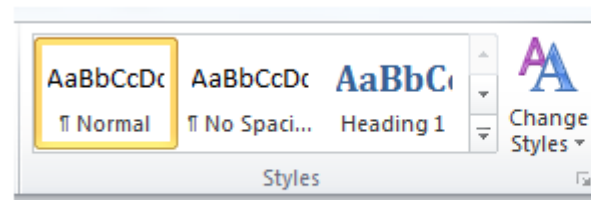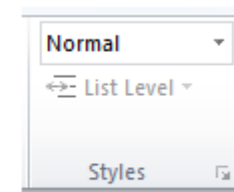
Features

- DocControl group: Update Document
  - Manage document configuration control information embedded as fields in the document
  - Consistently update the table of contents; list of figures and tables; and all cross references in the document
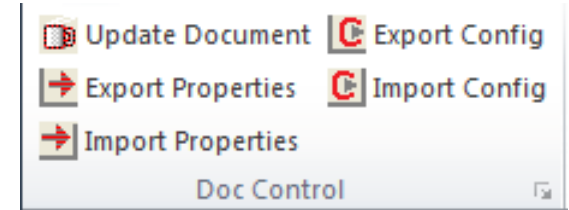
Features

- DocControl group: Update Document
  - Optionally protect certain meta data in Update Document visual control
  - Optionally protect editing in headers and footers
  - Optionally lock 'form type' document, allow form fields/content controls

Features

- DocControl group: Export Properties
  - Export all custom document properties to a text file for importing into another document based on the same template
  - Used to transfer meta data to a new document with MS Word template changes
- DocControl group: Import Properties
  - Import all document properties that have been exported with the 'Export Document Properties'
- DocControl group: Export Config
  - Export all custom document properties to a text file for import into the PDMS workbook or company PDMS system (interfacing code supplied)
- DocControl group: Import Config
  - Import all custom document properties from a text file as exported by the PDMS workbook or company PDMS system (interfacing code supplied)
  - Use Update Document utility after import to apply changed metadata

Features
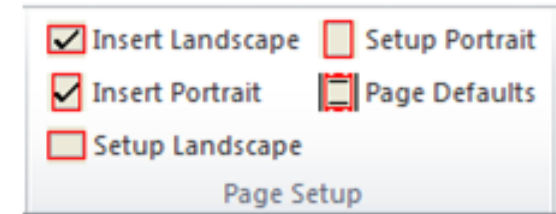
Page Setup

- Page Setup group: Insert Landscape,
                     Insert Portrait
  - Insert landscape/portrait section with all the correct formats, headers, footers and fields
  - Options: at the cursor position, using selected text, at the end of document
  - No warping of text in headers & footers!
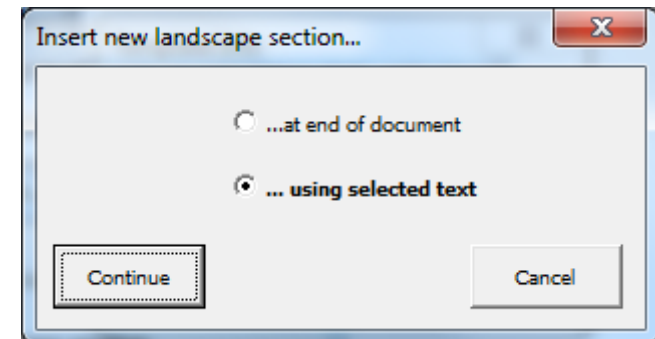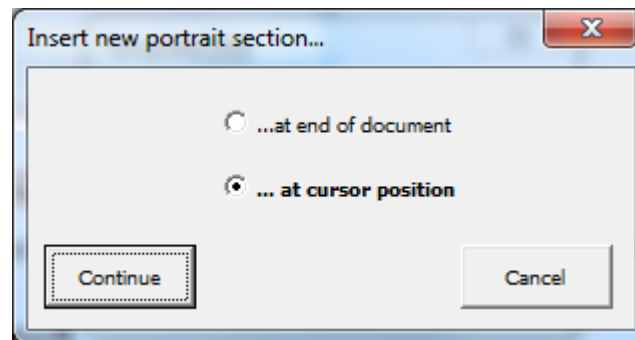
- Page Setup group: Setup Landscape,
                     Setup Portrait
  - Format current section to the correct landscape/portrait format
  - No warping of text in headers & footers!

Features

- Page Setup group: Page Defaults
  - Set default page layout parameters for Insert Landscape, Insert Portrait & Setup Landscape, Setup Portrait utilities
  - Two predefined page sizes – A4 & Letter
  - Other user defined default page sizes possible
  - Change default values only or also apply to all sections in document
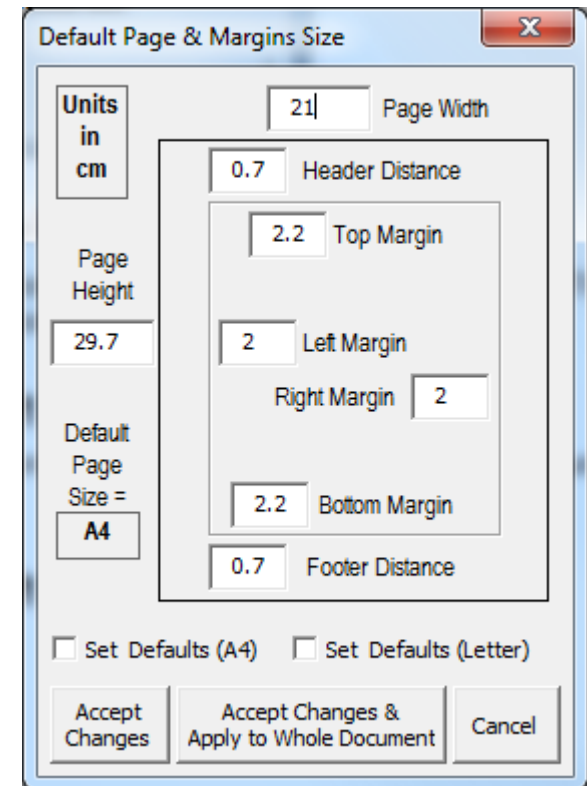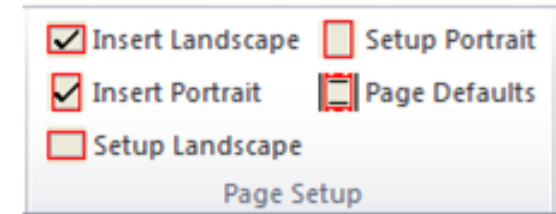
Features

- Table group: Format Table
  - ○ Format new or existing table
  - ○ Implement consistent company table standard

- Table group: Table Header
  - ○ Format selected text as table header
  - ○ Use company table standard

- Table group: Abbreviations
  - ○ Delete current abbreviations table and compile new one with abbreviations found in document
  - ○ Make use of abbreviations listed in template & user abbreviations databases

Features
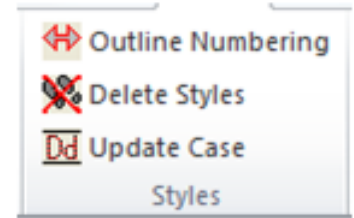
- Styles group: Outline Numbering
  - Easily adds outline numbering to paragraphs, fit in with outline numbered headings
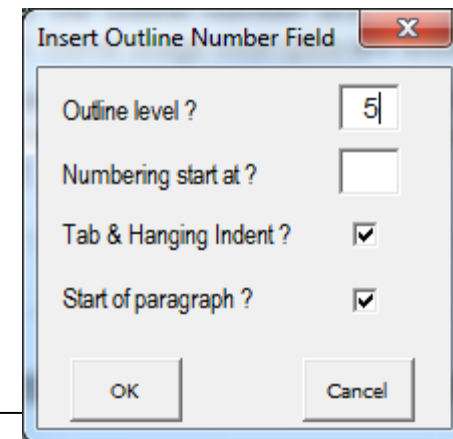
2.2.3.1. Outline Numbering

| 2.2.3.1.1. | Outline numbered paragraph with all the default options, outline level starting at level 5. This paragraph has a tab after the outline number and is formatted using a hanging indent. |

Features

- Styles group: Delete Styles
  - Delete all foreign (not permitted) styles as defined in template database
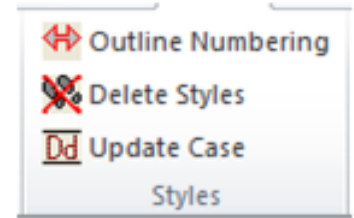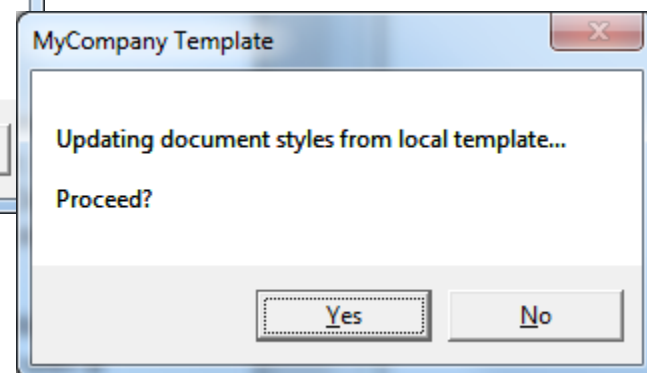 - Update all styles with those in default attached MS Word template
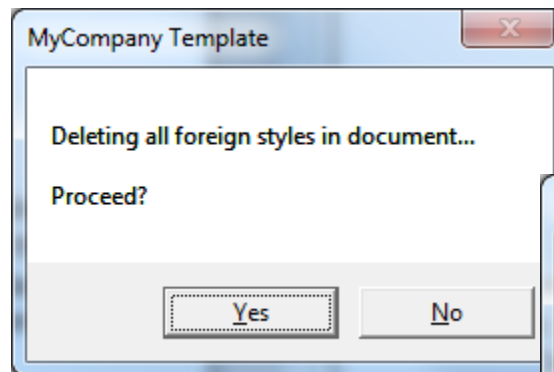
Features
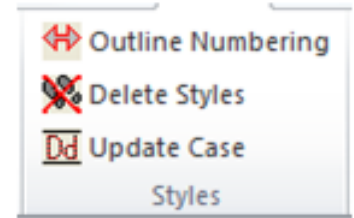
- Styles group: Update Case
  - Apply correct case formatting to all headings and captions as defined in template database
  - Maintains uppercase for abbreviations
  - Maintains lowercase for link words

Examples of these are:

Heading 1	**UPPERCASE FORMATTING IN BOLD 12**
Heading 2	**UPPERCASE FORMATTING IN BOLD 11**
Heading 3	**Title Case Formatting in Bold 11**
Heading 4 to 9	**Sentence case formatting in bold 11**
Caption Figure	**Title Case Formatting in Bold 11**
Caption Table	**Title Case Formatting in Bold 11**

Features
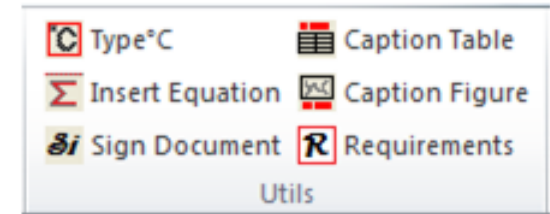
- Utils group: Type °C
  - Type °C at the cursor position
- Utils group: Insert Equation
  - Insert numbered equation in the document
  - Implement standard MS Word numbering fields for easy cross-referencing
  - Use default MS Word equation editor, prevents document corruption caused by many 3rd party utilities with extensive use of equations

5.2. APPENDIX B: MORE DETAIL INFORMATION

See equations (5.1) and (5.2) below:

$$a = \sqrt{b^2 + c^2} \qquad (5.1)$$

$$y(k+1) = b_0 \cdot y(k) + a_0 \cdot x(k) + a_1 \cdot x(k-1) + a_2 \cdot x(k-2) \qquad (5.2)$$

Features
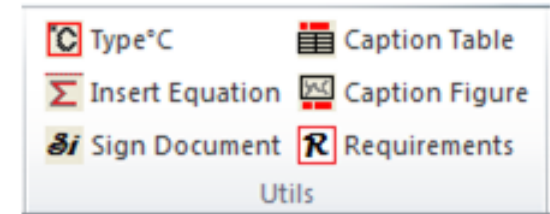
- Utils group: Sign Document
  - Digitally sign document (without locking it), used for letters & memos
  - Use composite date-time stamped signature, single bitmap for enhanced security
  - Options: create signed copy-protected PDF, delete signature from MS Word document, open the signed PDF document, signature height
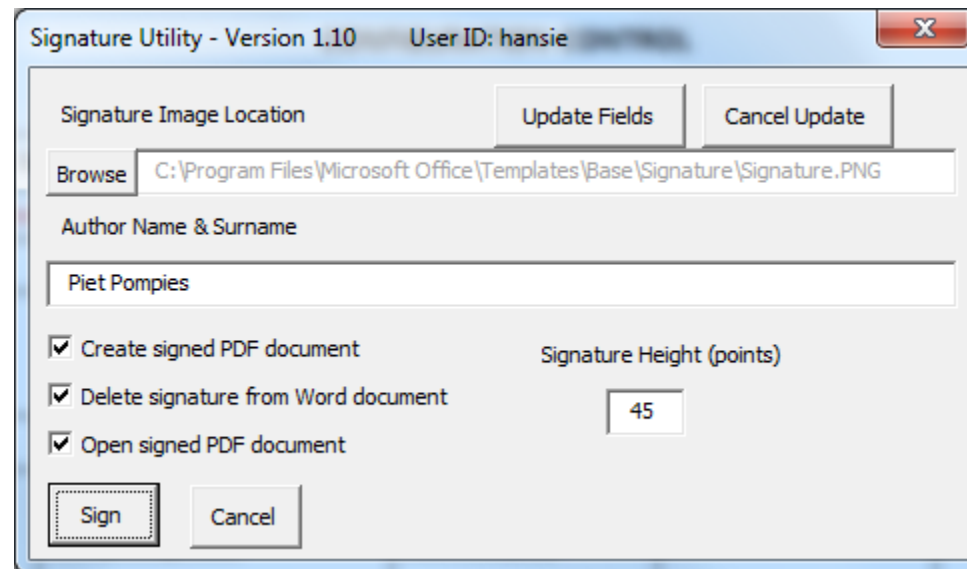
Features
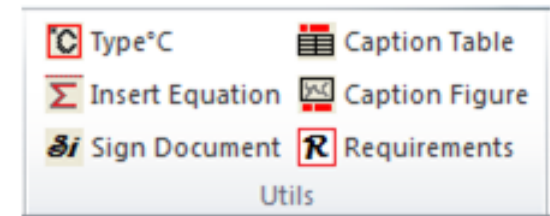
- Utils group: Caption Table
  - Insert table caption at beginning of paragraph above table, change style accordingly
  - Non-breaking white space added between 'Table' and table number that makes up the caption label
  - Whole caption label always together on same line when referenced
  - Caption formatted to always stay with table header and 1st table row on same page
- Utils group: Caption Figure
  - Insert figure caption at beginning of paragraph below inline figure, change the style accordingly
  - Non-breaking white space added between 'Figure' and figure number that makes up the caption label
  - Whole caption label always together on same line when referenced
  - Special formatting applied to inline figure, always stay with caption on same page

Features
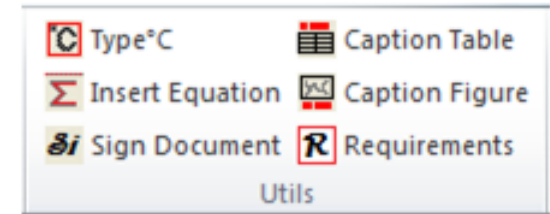
- Utils group: Requirements
  - Compile requirements table at cursor position
  - Based on use of auto numbering Requirements style in document
  - Insert cross-reference table; requirement number, requirement name, heading number

2.3.3. User Requirements

Req#1   My 1st Requirement Name

My 1st requirement text my 1st requirement text my 1st requireme

2.3.4. System Requirements

Req#2   My 2nd Requirement Name

My 2nd requirement text my 2nd requirement text my 2nd requirement text my 2nd requirement text

MyCompany Template

Requirements table will be inserted at current cursor position.

Proceed?

[Yes]   [No]
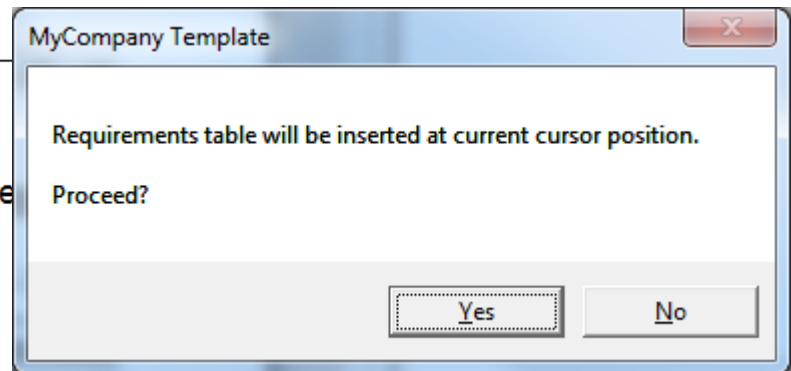
Table 2: Requirements Cross Reference

No.	Description	Par.
Req#1	My 1st Requirement Name	2.3.3.
Req#2	My 2nd Requirement Name	2.3.4.

Change Management

- Implementing a system like this in an organization can be a daunting task
- This should not stop you making the right decision for your organization
- Basic change management scheme:
  - Create a documentation standard for your organization if it does not exist
  - Identify your organization's Microsoft Word super user(s)
  - Implement the documentation standard (face value) into the default templates
  - Roll-out the Automated Template System to the super user(s)
  - Train the super user(s)
    - Self study of the user manual with pre-defined template usage exercises
    - Physical/remote group contact session to mark exercises & embed training

Change Management

- ◦ Create 'most used' standardized Microsoft Word document layouts based on default templates
- ◦ Roll-out the Automated Template System to elect target group
- ◦ Super user(s) train the elect target group
  - • Physical/remote group contact session - Automated Template System presentation & demonstration
  - • Self study of the user manual with pre-defined template usage exercises
  - • Physical/remote group contact session to mark exercises & embed training
- ◦ Fine tweak the training syllabus
- ◦ Create company wide Automated Template System roll-out & training plan
- ◦ Implement the company wide Automated Template System roll-out & training plan
- ◦ Create compliment of standardized Microsoft Word document layouts based on default templates
- ◦ Super user(s) remain the 1st contact point for user support
- ◦ Regular process & documentation quality measurement to enhance overall learning in the organization

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