

Engineering Change Control

Objective

The primary purpose of the ECC module is to enable SYSPRO users to better manage engineering changes to products and/or associated data. This change management is achieved through various features and processes.

The ECO Process

The Engineering Change Order process is a user-definable workflow type sub-system designed to replace the paper trail that usually accompanies any changes to product design data.

It provides the mechanisms, with audit trails, for: the assigning of product design tasks to particular users or groups of users; the transfer of these tasks between users or groups of users; user notification of new tasks as well as reminders of outstanding tasks; and electronic sign offs.

Any maintenance of the BOM and/or routing of a product under the control of ECC may only be accomplished by means of a current ECO. The system allows for preventing new purchase orders, jobs or sales orders being raised for any products (current and/or all revisions) included on the ECO. Existing orders can be placed on hold.

BOM, Routing and Job Archiving and Retrieval

This allows for archiving and retrieval of previous revisions/releases of BOM's, routings and jobs enabling the user to reproduce these previous revisions/releases either as planned or as built.

Stock Control

Stock is held at the revision/release level and options are available at stock code level to govern sensitivity to revision/release.

Drawing Register

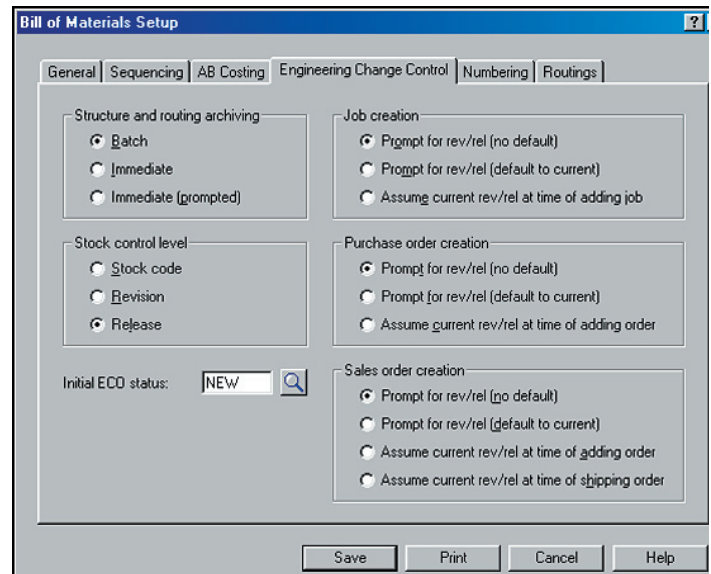
The Drawing Register program allows you to keep track of product related data such as drawings, circuit diagrams, CNC programs etc.

The ECO Process

To enable the system to control the flow of work and security issues, the ECC system has its own user table. There is a one-to-many cross-reference from ECC user to SYSPRO user that allows an ECC user to be either a single SYSPRO user or a group of SYSPRO users e.g. 'Drawing Office' or 'Review Committee'.

Engineering Change Orders

Engineering Change Orders are the hub of the ECC system, the



mechanism by which changes to products under the control of ECC are documented and controlled.

The ECO cycle is governed by user-defined status codes. This allows for defining statuses that have meaning within the company. Each user-defined status is associated with a system status that enables the system to 'relate' to the userdefined statuses.

The link between the user-defined status and the system status is not a one-to-one relationship i.e. any number of user-defined statuses can be associated with a single system status. For example, while the system may only recognize the fact that an ECO is 'In Progress', users of the ECC system can define a string of statuses through which an ECO must pass during its 'In Progress' phase. This routing of ECO's through user-defined statuses is achieved by means of a status routing file in which all possible from/to statuses are held.

Also associated with user-defined statuses are events. When an ECO is moved into a status, any associated events are fired.

Once an ECO has been raised, the ECC user must identify all products affected by the change (at least one product must be specified before an ECO can be moved from the system status of 'New' to 'In Progress'). A where-used query (which includes

all routes identified as being under ECC) is provided to aid the user in identifying possible candidates. Also available on the where-used query are lists of existing jobs, purchase orders and sales orders relating to the products. These can be placed on hold manually, catering for users who do not wish to make use of the status events to achieve this.

When the ECO is moved from 'New' to 'In Progress', the current revisions/releases of the BOMs and routings for all products listed on the ECO and for all routes flagged as being subject to ECC are copied to separate tables. All maintenance of BOMs and routings for ECC controlled products is performed against these tables.

BOM AND ROUTING ARCHIVING AND RETRIEVAL

Older revisions/releases of products can be archived by two methods. There is a batch program that will archive prior revisions/releases of products based on a number of criteria i.e. stock code (all, range, single or list), number of revisions/releases to keep and date of super session. Alternatively, the previous revision/release of a product may be archived when the updated version is accepted as current by means of an ECO. There is a setup option that governs whether or not immediate archival is available. This can be set to 'yes' (which automatically archives the prior revision/release) or 'prompted' (which will prompt the operator as to whether the prior revision/release should be archived).

The structure and routing records being archived are written to XML format files. These archived products can be retrieved via either the structure and routing maintenance program or the job maintenance program.