XStep Café

- **Mass Creation and Assignment of XStep Objects to Routings, Master Recipes, or Manufacturing Orders**

October 02, 2013

Customer

Business Needs

Business Needs:

- **Extend usage of**
  - (Browser-based) PI Sheets/Electronic Work Instructions
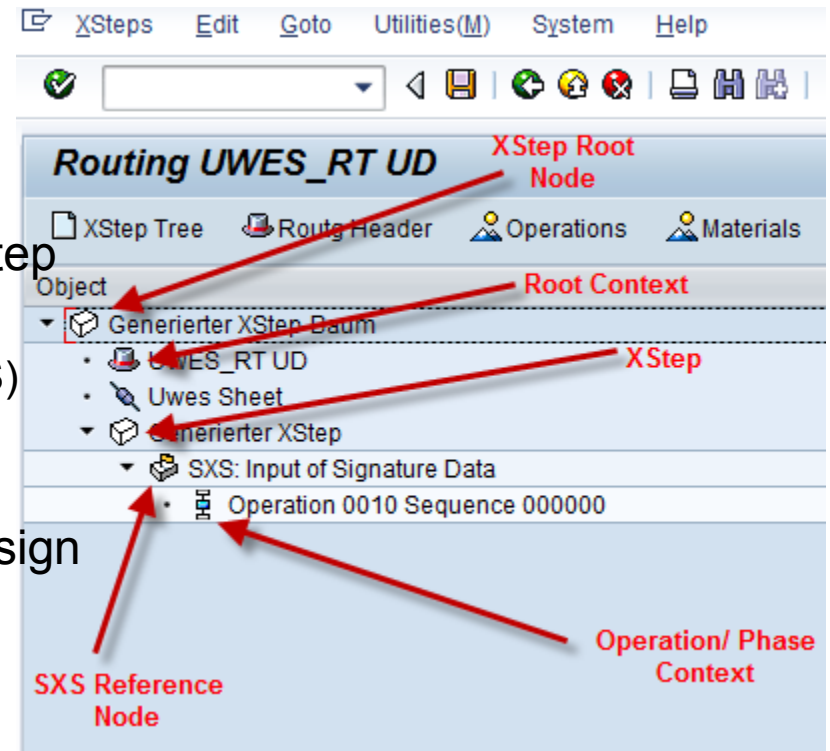 - Control recipes/Control instructions

Create XSteps and assign them to many applications that didn't had XSteps before

Do this in an automated way with a lot of data sets (mass maintenance)

Prerequisites

Prerequisites:

- **Content of above mentioned objects is modeled using XStep functionality**

  - Define the required content of the XStep tree
    - Preferably use Standard XSteps (SXS)

- **Application context is known**

  - Order number/Routing number → assign XStep tree
    - Root context (e. g. routing key fields [PLNTY/PLNNR/PLNAL])

  - Operation/Phase number → assign XStep, SXS Reference node
    - Step context (e. g. routing operation key fields [PLNTY/PLNNR/PLNKN])

XStep Maintenance

Maintenance of XSteps (SAP Standard)

- **is realized as integrated function in applications**
  - Prerequisite: Implemented BAdIs of XStep framework

- **XStep editor required for creating XStep trees and XStep tree content**

- **No XStep creation in batch mode/via background jobs**

Idea: Create and assign XStep objects "outside" of the XStep editor

- **Already realized for rework scenario**
  - Function module CMX_TOOLS_FM_CREATE_XS_TREE (Package CMX_TOOLS)

Process XStep Objects "Outside" XStep Editor - Remarks

Manipulating XSteps "outside" XStep Editor means:

- **No direct access to application context**
    - Empty buffer tables
    - Some authority checks not executed (that would be executed during calling application transaction)
    - Database tables of application aren't locked
    - …

- **Missing features and functions (provided by XStep editor framework)**

Process XStep Objects "Outside" XStep Editor - Hints

General hints:

- Use interface or class methods of XStep runtime whenever possible
    - Check content of class CL_IM_CPS_EXECUTION_I (routings/master recipes)
    - Check content of class CL_IM_COCR_CMX_BI_XSTEPS (manufacturing orders)
- Implement authority checks
- Check existence of XStep objects and application data
- Log your activities
    - Use methods of class CL_CMX_TOOLS_APPL_LOG
- If necessary implement "rollback" mechanism
    - Clean up your data by removing outdated XStep data (remove complete XStep tree)
- Care for proper error handling and messaging
- Don't directly change data sets of DB tables storing XStep content
- **Test, test, test…**

Prototype Demo: Create XStep Content for Standard Routing

IMPORTANT:

- **Purpose of the prototype:**
  - Explain basic implementation steps
  - Focuses on methods to create XStep objects

- **Prototype**
  - isn't suited for productive usage
  - doesn't consider all general hints that were mentioned before

Recommedation:

Get in touch with our SAP PP-PI consultants if you plan to execute such mass creation and assignment of XStep objects

Thank you