

Next Generation Court Technology Standards

Phase 1

Court Business Process Model
Concept of Operations for BPM
Application Capability Extraction Tool

March, 2016



Funding for this project was provided in part by the State Justice Institute Award SJI-15-N-031. The points of view expressed are those of the National Center for State Courts and do not necessarily represent the official position or policies of the State Justice Institute.

Acknowledgements

The project was supported by a Working Group of court practitioners and other subject matter experts established by the Joint Technology Committee (JTC) of the Conference of State Court Administrators (COSCA), the National Association for Court Management (NACM) and the National Center for State Courts (NCSC). Other participating organizations included the Court Information Technology Officers Consortium (CITOC) and the IJIS Institute (IJIS).



JTC NextGen Standards Working Group:

Kevin Bowling (Chair)
Michigan 20th Judicial Circuit

Sherri Dennis
Nebraska Supreme Court

Giuseppe Fazari
New Jersey Superior Court

Blake Hawthorne
Texas Supreme Court

Christie Hency
Scott County, Missouri Circuit Court Clerk

Layne Jones
Oklahoma State Courts Network

The Honorable O. John Kuenhold
Colorado Judicial Branch

Steele Price
Arizona Supreme Court

Penny Rainaldi
Utah State Courts

Virlynn Tinell
Mohave County, Arizona Superior Court Clerk

Jeffery Tsunekawa
Seattle Municipal Court

Court Information Technology Officer's Consortium (CITOC)

Chad Cornelius
Colorado Judicial Branch

Barb Homes
Administrative Office of Pennsylvania Courts

IJIS Institute (IJIS)

Jim Cabral
MTG Management Consultants

Akbar Farook
Sierra-Cedar Justice and Public Safety

National Center for State Courts (NCSC)

Jim Harris

John Matthias

Larry Webster

CONTENTS

- 1 Overview 1
- 2 Completed Court Business Model 1
- 3 Extraction of Requirements 1
- 4 User Consolidation of Requirements 2
- 5 Non-functional Requirements 2
- 6 Traceability Matrix 2
- 7 Summary 3

1 OVERVIEW

The Purpose of the NextGen BPM Application Capability Extraction Tool is to assist users in preparing requirements for new technology.¹ After the Court Business Process Model has been completed, this tool can be used to generate functional requirements for system procurement, or for the design phase of system construction.

It is recommended that court staff review the “As-Is” model and resolve any issues and problems that may exist because of inadequate technology or other factors. The “To-Be” model should be used for developing requirements so the new system is not bound by the constraints of inefficient existing processes.

2 COMPLETED COURT BUSINESS MODEL

The Court Business Model should contain a full analysis of every aspect of operations that may be affected by the new technology. This includes the following levels of analysis:

- Court
- Case type
- Business process category
- Business process group
- Elementary business process
 - State
 - Use case
 - Document
 - Data element
 - Business rules
 - User requirements

The Court Business Model is stored in a database consisting of 17 entities that support these levels of analysis and the complex relationships between them.²

As requirements are developed, they also will be added to this database, so traceability between the requirements and the business processes can be maintained. In addition, non-functional requirements may be added to the database to support court needs that are independent of business operations.

3 EXTRACTION OF REQUIREMENTS

Each use case in the Court Business Model contains a list of system actions that are the equivalent of functional requirements. The NextGen Business Process Methodology contains a grammar and syntax for preparing these statements of system actions that will facilitate the requirements extraction process.

¹ This is one of a suite of tools that will be developed in a future phase of the project.

² These 17 entities are described in the NextGen BPM Adaptation Tool Requirements documents.

If the same terms are used for similar functions, it will be much easier to consolidate the list of court needs. The first step in the extraction process is to pull all of these system actions out of the use cases, and combine them with additional user requirements defined in the User Requirements Table.

4 USER CONSOLIDATION OF REQUIREMENTS

The second step in the extraction process is to present this list to the user, so a sorting process can begin. The user will select one of the system actions or enter a search term – perhaps one of the verbs from the grammar and syntax instructions. The system should then sort the list, placing the system actions and user requirements that match the search term or the verb from the selected action at the beginning of the list. For example, a search on the verb “record” will bring results with requirements that provide the “record” capability.

The user then reviews the list with the search term and determines which system actions are functionally equivalent to one another. After marking these items, the system should prompt the user to select the language from one of them, or to enter new language for the requirement. The system then creates a requirement in the Requirements Table, and links that requirement to all of the selected system actions and user requirements that have been marked by the user. It may be necessary to search on several terms – the verb, the direct object, and the indirect object – to ensure that all of the related information has been identified.

After the requirement has been created and all of the relevant system actions and user requirements have been linked to it, the user should have the option to apply a filter to the displayed list so only the unselected system actions remain. The user can continue to work with the items that matched the original search term, or enter a new term.

Using this procedure, the user is able to create a list of functional requirements, properly linked to the appropriate use cases. As there may be hundreds or thousands of system actions and user requirements in the use cases, this process could take some time. In the end, the user should be able to display or print a list of the requirements that have been generated.

5 NON-FUNCTIONAL REQUIREMENTS

The court may wish to specify non-functional requirements for a system, as well. These requirements may relate to characteristics of the court technology infrastructure, information exchange platform, etc. The system will allow the entry of these free-form text requirements, which are not linked to the use cases for the elementary business processes.

6 TRACEABILITY MATRIX

Two reports should be available from the Application Capability Extraction Tool. The first should list all of the functional requirements, followed by a list of references to the use cases, workflows, and sequence numbers from which they were derived.

The second report should list all of the system actions and user requirements from the use cases, with the number of the requirement that supports that activity. This creates two-way traceability between the business processes and the system requirements.

7 SUMMARY

The NextGen BPM Application Capability Extraction Tool assists courts in defining requirements for technology solutions based on their business needs, as articulated in the business process documentation. It ensures that no area of processing is excluded, if business process modeling has been completed properly.