Next Generation
Court Technology Standards

Phase 1

Court Business Process Model
Concept of Operations for BPM Adaptation Tool

March, 2016

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1 OVERVIEW

The NextGen Terminology Translation Tool will update labels throughout the reference model for local use, so this function will not be required in the BPM Adaptation Tool. The BPM Adaptation Tool will perform the rest of the functions needed to customize the reference model for state and local court use.[1] This will include adding, modifying, and deleting existing table entries and relationships.

2 BPM ADAPTATION TOOL OPERATION

The BPM Adaptation Tool will be used to systematically document the layers of court business processes to fully describe the activities that are or may be supported by technology applications. This includes designating elementary business processes that are reused in many areas of the court. The creation of process flowcharts at the business process category, business process group, and elementary business process levels will not be performed by this tool, since numerous applications are available to perform this function, and some can be acquired at no cost. The business process model for the court will fully enumerate and catalog all of the processes for which flowcharts should be created, and will serve as a method of organizing and storing this important information.

The remainder of this document will describe the 17 entities in the NextGen Court Business Process Reference Model, and how the BPM Adaptation Tool will be used to customize this reference model for a local court or court system. A summary diagram of these tables is on the following page.

2.1 COURT TABLE

2.1.1 Definition

The Court Table is an entity that describes courts that are included in the business process analysis.

2.1.2 Table Contents

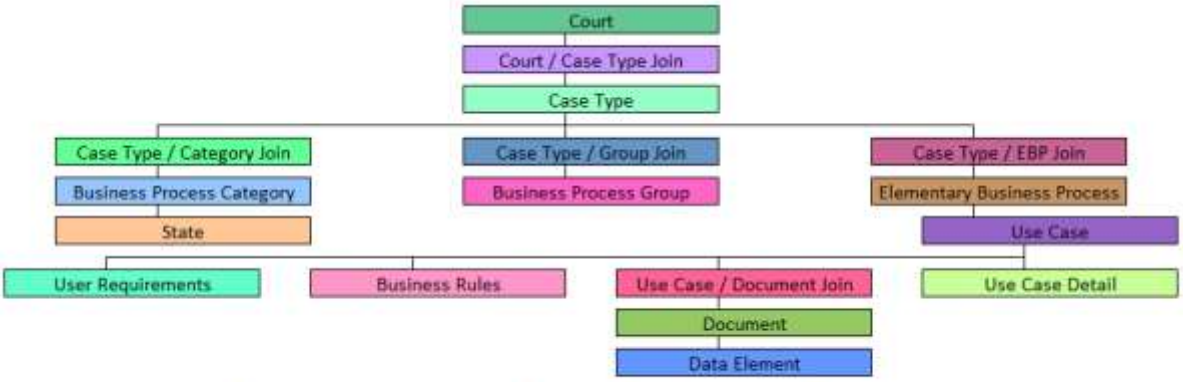
If the analysis is conducted at the state level, then the Court Table will contain one entry for each level of court in the state. If the analysis is conducted for a political subdivision of a state, then the Court Table will contain an entry for each court that is included in the analysis.

2.1.3 Properties and Attributes[2]

Three properties and one attribute are defined for the Court Table. The Court Type property indicates what kind of court is being referenced, in terms that will make sense to people in other states. Possible values of this attribute include court of last resort, intermediate appellate court, general jurisdiction trial court, limited jurisdiction trial court, and special jurisdiction court.

[1] The NextGen BPM Adaptation Tool will be developed in a future phase of the project. At present, who will create it or how it will be constructed have not been defined.

[2] For purposes of the NextGen standards, a property is an essential characteristic of a thing, while an attribute describes what it includes.



NextGen Court Business Process Reference Model Entities

The Government Level property indicates the level of government that is responsible for this court, whether it be a state, county, city, or other level of court. The Number of Locations attribute describes the distribution of courts through the geographical area. If a state has twelve judicial districts, for example, the number of locations would be twelve. If one of those districts has a number of courthouses in small, rural counties where cases may be filed, but with no sitting judge in that location, they probably should be counted as separate locations. A state supreme court that occasionally hears arguments in other locations likely would not count those facilities, unless the court has a permanent presence there.

An Active Flag property is provided for this table. Only entries with the active flag set to "Yes" will appear on reports produced by the application, and users will be able to toggle the flag setting. This will allow court staff to print reports for specific areas as they perform process analysis. By default, the Active Flag is set to "No" in all of the reference table entries.

2.1.4 Operation of the Tool

System users will be able to add, modify, delete, replicate, and rename Court Table entries. Users also will be able to adjust the available value lists for the Court Type and Government Level properties, and will be able to easily change the value of the Active Flag property between "Yes" and "No". Courts also will be able to enter a numeric value for the Number of Locations attribute for a court.

2.2 Case Type Table

2.2.1 Definition

The Case Type Table is an entity that defines categories of cases that reflect practice in the state or local court that is the subject of the business process analysis.

2.2.2 Table Contents

The Case Type table will contain entries for each case type in the area of study. If multiple levels of court are considered, and if these courts have concurrent jurisdiction in any case type, then the case types may be reused by both courts (if processing is the same), or they may be duplicated so operational differences between the courts can be described.

2.2.3 Properties and Attributes

The Case Type table has two properties, Major Grouping and Active Flag. Major Grouping assigns the case type to one of the nationally-recognized case categories, e.g., criminal, traffic, civil, domestic, juvenile, and appellate. The Active Flag for the case type operates in the same manner as the Active Flag for the Court Table.

2.2.4 Operation of the Tool

Users of the BPM Adaptation Tool must be able to add, modify, delete, replicate, and rename case types. They also must be able to set the value of the two properties of each table entry, Major Grouping and Active Flag.

2.3 Business Process Category Table

2.3.1 Definition

Business process categories describe end-to-end processes in judicial branch operations. They separate functions in case processing so details can be analyzed and optimized without the confusion that can result from evaluating more complex models. Architectural diagrams are a perfect analogy to business process categories. An electrical engineer only needs to see information about wiring, fixtures, switches, outlets, etc., in a building on which he or she is working. By separating the electrical schema from those used by mechanical, structural, and engineers in other disciplines, architects can coordinate building design in an efficient and cost effective manner. In the same way, business process categories separate process information about charges from process data about bonds, party representation, warrants, and other areas. It is the responsibility of the business process architect to ensure that these business process categories comprehensively and efficiently describe court operations so that all of the pieces fit together into a coherent whole.

An end-to-end view of these related activities is necessary to optimize the use of judicial branch resources. It is essential to know what information may be needed later in a process to ensure its collection when data capture is most efficient. An end-to-end view also helps to eliminate redundant activity, unnecessary handoffs, and other productivity killers in court operations. This is the perspective that is most difficult for people who work in the judicial branch to understand.

Each business process category has a set of states associated with it. They define the possible states of the subject of the category. For example, the Motion / Hearing / Order business process category has states associated with the motion (the subject of this particular category), e.g., Motion Filed, Motion Briefed, Motion Argued, and Motion Decided. In most business process categories, the purpose is to get the subject from the initial state to the final state, e.g., to get the motion from the filed state to the decided state. States are defined for each category, but are stored in a separate State Table. State changes within a process are recorded at the elementary business process level, in the use case.

Each business process category should include a simple flowchart that illustrates its major steps. These steps are defined by the business process groups that will be defined later in the analysis. The flowchart can be prepared and attached to the business process category after the group-level analysis is complete.

2.3.2 Table Contents

The Business Process Category reference model contains a set of entries that represent the common activities that occur in courtrooms and clerks' offices all over the country. Some of the categories are common to all case types, and some may be specific to a single case type. The sum of all of the business categories should constitute all of the activities of the case type.

2.3.3 Properties and Attributes

One property is associated with the Business Process Category table, the Active Flag. This flag functions in the same manner as it does in the Court Table and the Case Type Table. An attribute also is included, the State Subject, which clarifies what the subject of state changes will be.

2.3.4 Operation of the Tool

An important part of the business process analysis is to review and modify the reference model. While numerous business process categories are defined for each case type in the reference model, court staff should plan on spending considerable time analyzing local operations and modifying the business process categories to match court requirements. Add, modify, delete, replicate, and rename functions must be available to the users, along with the ability to modify the Active Flag property and the State Subject attribute.

2.4 BUSINESS PROCESS GROUP TABLE

2.4.1 Definition

Business process groups define work in the form in which courts usually perform it, court hearings, filing events, etc. This is the more common view of people who work in the court. The goal of this perspective is to make every activity performed by a judge or court staff member as efficient as possible. Optimization of court business processes requires both this functional view (business process groups), and the end-to-end process view (business process categories).

There are two special business process groups to which can be attached activities that pertain to "All Hearings" or "All Filings". Examples of things that can take place at all hearings include requests for continuance, failure to appear, calling cases, and recording hearing results. Report programs will attach these activities to each hearing or each filing in the case type.

Each business process group should include a process flowchart that illustrates the work to be performed. This flowchart does not need to be at the activity level – that detail is reserved for the elementary business process – but the flowchart should have swim lanes if multiple actors are involved. The symbols in the flowchart should represent all of the elementary business processes that may be performed.

2.4.2 Table Contents

The Business Process Group table contains one entry for each of these functional areas, primarily court events, clerk filing and issuing of documents, and related activities.

2.4.3 Properties and Attributes

Business process groups have two properties. The first is Group Type. Group Type is used to distinguish courtroom work from in-chambers activities, and clerk work from other areas of the court's operations. The second property is the Active Flag, which functions in the same manner for all of the tables in which it is present.

2.4.4 Operation of the Tool

Application users must be able to add, modify, delete, replicate, and rename each entry in the Business Process Group Table. They also must be able to easily toggle the active flag for each record.

2.5 COURT / CASE TYPE JOIN TABLE

2.5.1 Definition

This entity describes the association or relationship between the level of court and the case type.

2.5.2 Table Contents

There will be an entry in the Court / Case Type Join Table for each case type heard in each level of court. Courts likely will be linked to multiple case types, and case types may be connected to multiple courts.

2.5.3 Properties and Attributes

There are three properties and one attribute for the Court / Case Type Join Table. The Jurisdiction property indicates whether the jurisdiction exercised by the court is exclusive or concurrent.

The Upper Limit property and the Lower Limit property are used to describe the jurisdiction of the court. In civil cases, the upper and lower limits may be expressed in the dollar amount of the suit. In criminal cases, the jurisdiction may be defined by offense seriousness or offense type. Some states distinguish law and equity cases, which also may be reflected in these two properties.

This table contains a property – Volume – for the (approximate) number of annual filings for this case type in this particular level of court. This information can be useful in allocating resources to work on the areas of court operations where improvements will be most beneficial.

Finally, a Localization attribute can be used to define a subset of the courts for which the relationship is being created. In a few states, the relationship between courts and case types may vary from county to county (or city to city, or parish to parish) will vary. If this is the case, multiple join table entries may be required to accurately describe the relationships. One join table entry can define the relationship for most of the local areas, while additional entries can define relationships, properties, and attributes for the specific exceptions. The Localization attribute will identify the geographical area to which these entries apply.

2.5.4 Operation of the Tool

The user of the system must be able add, modify, and delete table entries, and update the properties and attributes. When the court completes work on this level of the model, an accurate depiction of the allocation of case types to levels of court should be available.

2.6 CASE TYPE / BUSINESS PROCESS CATEGORY JOIN TABLE

2.6.1 Definition

This entity documents relationships between case types and the business process categories that they include.

2.6.2 Table Contents

Each case type in the courts being modeled will have an entry for each business process category that it contains. A case type should include multiple business process categories, and a business process category may be linked to multiple case types.

2.6.3 Properties and Attributes

One property and one attribute are associated with the Case Type / Business Process Category Join Table. The Category Type property defines the key business process category or categories that are essential to the case type. In a criminal felony case, the Key Business Process Category would be charge filing / disposition / sentencing. Two other category types are Normal Business Process Category and Other Business Process Category. The Normal Business Process Category usually occurs in the case type. The Other Business Process Category may appear in the case type, but typically does not.

The Position attribute shows where the business process category fits within the case type. Issuance of investigative documents usually precedes the filing of criminal charges in a felony case, so the Position attribute would be set to "Pre". Appeals actions usually follow disposition and sentencing in a criminal case, so the Position attribute would be set to "Post". Two business process categories (arrest / detention /release and motion / hearing / order) can occur almost anywhere in the processing of the case, so the Position attribute would be set to "Various". The two other attributes of this variable are "Key" and "Concurrent".

Because this property and attribute are associated with a business process category that may vary as they are placed in different case types, they are defined on the join table between these two entities.

2.6.4 Operation of the Tool

Users must be able to add, modify, and delete relationships between the case types and the business process categories, to suit local court operations. Users also must be able to select values for the property and attribute associated with this table.

2.7 Case Type / Business Process Group Join Table

2.7.1 Definition

This entity describes the relationship between case types and business process groups. For example, all of the court hearings that may occur in the case type will be described, along with document filings and other activities.

2.7.2 Table Contents

Each case type in the courts being studied will be linked to all of the business process groups that it contains. Each case type will have many business process groups, and each business process group may be linked to more than one case type.

2.7.3 Properties and Attributes

One attribute is defined for the Case Type / Business Process Group Join Table. Sequence designates the general order of the business process groups in the case type. They are numbered sequentially.

2.7.4 Operation of the Tool

Users must be able to add, modify, and delete these relationship records to match local practice. They also must be able to set the sequence of the business process groups within the case type.

2.8 Elementary Business Process Table

2.8.1 Definition

The elementary business process can occur at the intersection of the business process category and the business process group. It defines what can happen in a particular group with respect to a certain category. For example, what actions might be taken with respect to indigent representation (category) at an arraignment (group)? What actions in the termination of parental rights process (category) can occur when a TPR petition is filed (group)?

Some intersections between category and group will not have an elementary business process associated with them – if none of the activities of the category are performed in the group. For example, search warrants typically are not issued at a sentencing hearing.

Another important point is that the elementary business process is defined as work done by one person, in one place, at one time. When the category / group intersection defines a court event or other work that involves multiple actors, multiple elementary business processes must be defined.

2.8.2 Table Contents

The Elementary Business Process table contains entries for each relevant intersection between a business process category and a business process group. Many elementary business processes are reused, as the same actions are possible in a variety of settings. The elementary business process also will contain a link to its process flowchart. Again, multiple elementary business processes must be defined if multiple actors are involved at the group level, as is usually the case with court hearings.

2.8.3 Properties and Attributes

One attribute is defined for the Elementary Business Process Table. Multiple Link can contain a value of "All Hearings" or "All Filings" that will associate the elementary business process with all business process groups of that type within the case type.

2.8.4 Operation of the Tool

Users must be able to examine and add, modify, delete, replicate, or rename elementary business processes, as well as modifying the attribute value for each record.

2.9 State Table

2.9.1 Definition

Each business process category has a series of states associated with it. The purpose of the category usually is to move the subject of the category from the initial state to the final state. A subject of a category might be a case, a party, a document, a financial obligation, etc. In a child welfare case, the purpose of the main business process category may be to resolve the allegations contained in the petition. The allegations would be the subject of the category, and the states might include Filed, Admitted or Denied, Adjudicated, and Disposed.

The state will help to determine the next action. If a juvenile admits to an allegation, the case might next move to scheduling of a disposition hearing, for example. If the juvenile denies the allegation, an adjudication hearing might be set instead. The state should show where a particular case / person / document is at any time in a business process category.

2.9.2 Table Contents

The State Table contains multiple entries for each business process category, one for each possible state of the subject.

2.9.3 Properties and Attributes

The Sequence property orders the states that are associated with the business process category, but state changes are not required to follow the numbering sequence. Often activity in a case will move a subject back to a previous state.

2.9.4 Operation of the Tool

Users must be able to add, modify, and delete entries in the State Table. They also must be able to adjust Sequence values.

2.10 Case Type / Elementary Business Process Join Table

2.10.1 Definition

This entity connects elementary business processes to the appropriate points in the model, through the case type. Elementary business processes exist for a particular intersection between the business process category and the business process group, so this table defines their use in different case types. If the case type is not linked to the business process category and business process group of the elementary business process, then this relationship cannot be created. This ensures that elementary business processes can be reused, but only in the correct context.

In order to reuse an elementary business process in multiple case types or within a case type, the activities within the elementary business process must be the same. If there are operational differences, a separate elementary business process should be defined.

2.10.2 Table Contents

This table contains an entry for each elementary business process in each case type. A case type will contain many elementary business processes, and an elementary business process can be used in multiple case types. It is also important to note that multiple elementary business processes can exist at the intersection of a business process category and a business process group, if multiple actors are involved.

2.10.3 Properties and Attributes

One property is defined for this table. Sequence is used to indicate the order of this elementary business process among all of the processes defined for this category / group.

2.10.4 Operation of the Tool

Users must be able to add, modify, and delete entries in this table.

2.11 Use Case Table

2.11.1 Definition

This entity defines the use case that is created for each elementary business process. One use case must exist for each elementary business process. The use case consists of a set of related steps performed by actors and by systems, which are stored in the Use Case Detail Table. It also allows a use

case to branch to a different set of steps – an alternate workflow – if a certain condition exists or does not exist.[3] Branches to and returns from alternate workflows are stored in the Use Case Detail Table. State changes, from the list of allowable values for that business process category that are stored in the State Table, also are included as steps in the use case.

Process inputs, with their sources, and process outputs, with their destinations, are attached to the use case, but are stored in a separate table (Document Table). Similarly, business rules (Business Rules Table) and user requirements (User Requirements Table) for the elementary business process are associated with the use case, and are stored in separate tables.

2.11.2 Table Contents

One entry is made in this table for each use case. Use cases are not reused in multiple elementary business processes, so no join table is defined for this relationship. The use case table will contain a reference to its unique parent elementary business process.

2.11.3 Properties and Attributes

No properties or attributes are defined for the Use Case Table.

2.11.4 Operation of the Tool

Users must be able to add, modify, and delete Use Case Table entries.

2.12 Use Case Detail Table

2.12.1 Definition

The detail lines of a use case – user actions, system actions, branches to alternate workflows (and returns to the main workflow), and state changes – are contained in this table. There are separate entries for each of these actions.

Each Use Case Detail Table entry references its parent use case. A main workflow exists within each use case, and alternate workflows indicate other activities that must be performed if certain conditions exist or do not exist. Each entry also is sequenced within its particular workflow, so order is maintained. When a branch to an alternate workflow is needed, a step in the use case will define the condition, the value that triggers the branching, and the workflow to which the activity should be transferred. When the alternate processing is complete, a new use case entry will indicate a return, including the workflow and the sequence number to which the activity should be transferred.

2.12.2 Table Contents

Each Use Case Detail Table entry contains a link to its Use Case Table record, followed by a workflow designator and a sequence number. Also included is a data element that defines whether the entry is a system action, a user action, a conditional branch, a return, or a state change. Additional information follows, based on the type of action. A user or system action will have a text description of the action, following the procedure described in the Methodology document. Use case detail entries are associated with a single use case, so no join table is needed for this relationship.

2.12.3 Properties and Attributes

No additional properties or attributes are defined for this table.

[3] Most of these alternate processes will be defined in separate elementary business processes.

2.12.4 Operation of the Tool

Users must be able to add, modify, and delete table entries, re-sequence the steps, populate data elements, etc. This should be done in a spreadsheet-type view, so all of the Use Case Detail Table entries for a single use case can be managed at the same time.

2.13 Document Table

2.13.1 Definition

The Document entity is used to capture inputs and outputs of a process. They may be a printed document, a collection of data elements, an information exchange, etc.

2.13.2 Table Contents

This table contains information about each document or data set that is an input or output of a process. A document can be associated with multiple elementary business processes, and an elementary business process can have multiple documents.

2.13.3 Properties and Attributes

Document Type is defined as a property. This property can be defined as paper document, data set, information exchange, etc.

2.13.4 Operation of the Tool

Users must be able to add, modify, delete, replicate, and rename documents from the document table. They also must be able to attach them to various use cases.

2.14 Use Case / Document Join Table

2.14.1 Definition

This entity stores the keys that link a document with a use case.

2.14.2 Table Contents

A document is connected to a use case because it may serve as an input or output of that process. A use case likely will be linked to multiple documents, and a document can be linked to multiple use cases.

2.14.3 Properties and Attributes

One property is defined, the Role. Source and Destination also are defined as attributes. The Role indicates if a document is input to the process, output from the process, both, etc. If the document is a process input, then the source is noted. If it is an output, then the destination is entered. If it is both, then both the Source and Destination are captured.

2.14.4 Operation of the Tool

Users must be able to link documents to various use cases.

2.15 Data Element Table

2.15.1 Definition

The data elements that are included in a document are stored in this table. Each entry has a key that refers to the document.

2.15.2 Table Contents

This entity includes information about the data elements that are associated with documents. Because data elements are not reused in documents, no join table is needed for this relationship. Each data element entry contains a reference to its parent document.

2.15.3 Properties and Attributes

Sequence is captured as a data element property, enabling the order of information in the document to be retained. Data Type and Number also are properties of the Data Element Table. Number indicates how many times a data element is repeated in a document.

2.15.4 Operation of the Tool

Users must be able to add, modify, and delete data elements from a document, and provide the property settings.

2.16 Business Rules Table

2.16.1 Definition

Use cases typically include business rules. For the purpose of NextGen business process modeling, business rules are defined as things that people must do when they perform the activities listed in a use case that are not directly defined by the use case. They may be reflected as notes on a process flowchart, but will not have a symbol associated with them.

2.16.2 Table Contents

This table is composed of business rules in text format, and a link to their use case. Business rules are not reused in use cases, so no join table is required to describe this relationship. Each business rule table entry contains a reference to its parent use case.

2.16.3 Properties and Attributes

No properties or attributes are defined for business rules.

2.16.4 Operation of the Tool

Users must be able to add, modify, and delete business rules for use cases.

2.17 User Requirements Table

2.17.1 Definition

User requirements are things that a technology or application must do that are not directly reflected in the use case. They are captured as the process is being documented. They will be extracted with system actions as functional requirements.

2.17.2 Table Contents

This entity contains the user requirements and a reference to the use case with which they are associated. Because user requirements are not reused, no join table is needed to link them to a use case.

2.17.3 Properties and Attributes

No properties or attributes are defined for user requirements.

2.17.4 Operation of the Tool

Users must be able to add, modify, and delete user requirements for a use case.

3 SUMMARY

The NextGen BPM Adaptation Tool allows users to create full business process documentation by customizing a reference model, rather than creating all of the information from scratch. It is an essential component of the NextGen initiative, because the frameworks for court operations have significant similarities from state to state.

Reports are clearly needed to display information for process analysis team members as they work through the many details of court business processes. Many of these reports are defined in the NextGen Court Business Process Methodology document.