

Otherdbw3.pm23 - Programmatic Access to Materials and Methods

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Encode materials and methods

Use Case Number	Otherdbw3.pm23.1
Brief Description	The materials and methods section of a paper contains a rich set of information about how an experiment is run, the types of data produced, etc. This information can be encoded using semantic metadata, e.g. steps, datatypes, materials, equipment, etc.
Actor(s) for this particular use case	Cancer Researcher
Pre-condition The state of the system before the user interacts with it	A materials and methods section of a paper exists.
Post condition The state of the system after the user interacts with it	The materials and methods are encoded semantically.
Steps to take The step-by-step description of how users will interact with the system to achieve a specific business goal or function	1. The Cancer Researcher identifies the materials and methods section 2. The Cancer Researcher marks up the materials and methods section with semantic data 3. The Cancer Researcher imposes semantic structure as needed on the materials and methods section 4. The Cancer Researcher stores the encoded materials and methods for future discovery
Alternate Flow Things which would prevent the normal flow of the use case	None.
Priority The priority of implementing the use case: High, Medium or Low	Low.
Associated Links The brief user stories, each describing the user interacts with the system for the one function only of the use case. There would potentially be a number of user stories that make up the use case.	• Otherdbw3 - Programmatic Access to Materials and Methods
Fit criterion/Acceptance Criterion How would actor describe the acceptable usage scenarios for the software or service that meets the actor's requirement?	None.

Discover materials and methods for structured use

Use Case Number	Otherdbw3.pm23.2
Brief Description	Once a materials and methods section of a paper is encoded semantically, it is discoverable semantically. Users can identify the experiments and approaches that can be applied to their type of data, and then potentially even export the steps as a programmatically executable workflow.
Actor(s) for this particular use case	Cancer Researcher

Pre-condition The state of the system before the user interacts with it	A materials and methods section of a paper is encoded semantically and discoverable.
Post condition The state of the system after the user interacts with it	The materials and methods section is exported as a workflow.
Steps to take The step-by-step description of how users will interact with the system to achieve a specific business goal or function	1. The Cancer Researcher identifies the fields he would like to discover on, including data type based on an existing dataset 2. The Cancer Researcher discovers the structured materials and methods 3. If the materials and methods paper has been structured as a computable workflow, the Cancer Researcher saves it to be run on his dataset
Alternate Flow Things which would prevent the normal flow of the use case	None.
Priority The priority of implementing the use case: High, Medium or Low	Low.
Associated Links The brief user stories, each describing the user interacts with the system for the one function only of the use case. There would potentially be a number of user stories that make up the use case.	• Otherdbw3 - Programmatic Access to Materials and Methods
Fit criterion/Acceptance Criterion How would actor describe the acceptable usage scenarios for the software or service that meets the actor's requirement?	None.

The following use cases are directly application and overlap:

- Init1dbw6.pm8 - Support caB2B to integrate services on caGrid
- Init6pm23.pm5 - Brain Tumor in silico study - Pathology and Radiology data model