

WORLD INTELLECTUAL PROPERTY ORGANIZATION

SPECIAL UNION FOR THE INTERNATIONAL PATENT CLASSIFICATION (IPC UNION)

IPC Reclassification (IPCRECLASS) Request for proposals Terms of reference

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ANNEX 1: IPC Reclassification Requirement Document

ANNEX 2: Working list XML files specifications

ANNEX 3: Result list XML files specifications

ANNEX 4: XML Structure differences between working list and result list

ANNEX 5: Error list

ANNEX 6: WIPO Standard - ST.8

ANNEX 7: Technical specifications and infrastructure

ANNEX 8: Legacy tool for online IPC reclassification

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ANNEX 16: Legacy IPC reclassification workflow and robot

1. GLOSSARY

See ANNEX 14 for definitions.

2. GENERAL BACKGROUND

2.1. Introduction

2.1.1. Introduction to WIPO

The World Intellectual Property Organization (WIPO) is an inter-governmental organization with headquarters in Geneva, Switzerland. It is one of the 16 specialized agencies of the United Nations system of organizations.

WIPO is responsible for the promotion of the protection of intellectual property throughout the world through co-operation among States and for the administration of various multilateral treaties dealing with the legal and administrative aspects of intellectual property.

2.1.2. Introduction to the International Patent Classification (IPC)

The IPC, established by the [Strasbourg Agreement 1971](#), provides for a hierarchical system of language independent symbols for the classification of patents and utility models according to the different areas of technology to which they pertain.

More information is available under <http://www.wipo.int/classifications/ipc/en/>

2.1.3. Introduction to the IPCRECLASS project

The purpose of this project is to improve the use of the IPC as a search tool and stimulate its revision through easier IPC reclassification process based on ICT automation.

The scope of the project is limited to IPC reclassification management outside the Master Classification Database (MCD)

The project should aim at the creation of a new on-line service for IPC member States in view of facilitating the administration of IPC reclassification information from and to the MCD without deep ICT technical knowledge. It must preserve approved protocols and, to the maximum possible extent, make use of existing infrastructure to minimize project implementation costs.

The IPCRECLASS system should ensure that users are able to successfully find relevant IPC reclassification requests called “working lists” and submit in return IPC reclassification results called “results lists” as and when needed by the IPC revision procedure.

The outcome project should cover for the following major functionalities:

- Management of various waves of IPC reclassification working lists received from the MCD;
- Access to various tools to facilitate substantive work on reclassification

- Capture and checking of reclassification information to create IPC reclassification result lists according to agreed protocols and allow for their timely download by the MCD;
- Facilitate IPC reclassification status monitoring.

3. CURRENT BUSINESS PROCESS

3.1. Existing infrastructure and current workflow

The MCD (and only the MCD) will regularly provide complete or partial WLS to the repository, in particular after the completion of a revision project. WLS provided by the MCD are global, i.e. containing all documents relating to a revision project or to a particular correction.

In order to communicate the list of documents to be reclassified, the MCD generates XML wls files for each concerned IPC revision project and office.

XML wls files specifications are available at

<http://www.wipo.int/ipcreclassification/documentation/T03.06.01%20IS%20Working%20List%201.1.pdf>

XML wls are compressed Zip files with names similar to xml files names. They are sent by email to WIPO staff.

These files are published in the IPC reclassification web site for download by offices. wls files can be found under <http://www.wipo.int/ipcreclassification/>

Then, offices generate result lists XML files as result of their reclassification process. These files contain all necessary information to update the MCD with documents' reclassifications or correction for a given revision of the IPC. (see Annex 3 and Annex 6.).

In order to generate result lists XML files, offices have 2 options:

1. Edit the XML with editors and tools of their choice based on specifications under Annex 3.

Understanding the MCD reclassification process described under

<http://www.wipo.int/ipcreclassification/documentation/T03.06%20FS%20Reclassification%201.2.pdf> [7] is not essential to Contractor for the implementation of IPCRECLASS (this document is mentioned only for information purpose)

2. Use a legacy tool for online IPC Reclassification in order to assist the reclassification process. This tool is available under <http://ipc.prohosts.org/index.php>. This PHP web application was developed to help offices to reclassify their documents into a new version of IPC. The tool generates XML files with the results of reclassification data captured by the office, in appropriate format, so that the user does not require any knowledge or tool for XML editing. The application documentation is available under <http://ipc.prohosts.org/manual.pdf>.

After having generated their result list XML file, offices have to send it by email to the IB at ipc.reclassification@wipo.int following a protocol described under <http://www.wipo.int/ipcreclassification/>.

Upon reception of result files in the WIPO email box, a robot checks email subject and the name structure of the attach file and filters it through an antivirus. This robot performs some checking of the above mentioned protocol and automatically publishes the file in the relevant IPC version part of the reclassification web site <http://www.wipo.int/ipcreclassification/> and an email is sent to MCD to alert that a new result list is available for download.

The upload of such result lists by the MCD is performed on an ad-hoc basis.

Document of old revisions which have not been reclassified are collected in special working lists called XML Residual wls.

In case of reclassification errors or warning during the download and processing of the XML result list by the MCD, an error file is generated. See ANNEX 5 for legacy error files specifications.

3.2. What needs to be improved

- Some offices do not have access to staff with XML editing skills
- No possibility to filter documents in wls with criteria like symbol, priority, revision, reclassification type, etc.
- Absence of monitoring tools
- No IPC symbol input assistance to avoid input error and validate captured symbol
- Not enough validation controls on results lists
- Missing functionality and no long term plan for the maintenance of the legacy tool for online IPC Reclassification

4. REQUIREMENT SPECIFICATIONS

4.1. Functional requirements

4.1.1. Functions required

4.1.1.1. View Documents to be reclassified

4.1.1.1.1. Filters

See ANNEX 1 [6.1.1] for functional requirements. See technical specification of XML Working list files at <http://www.wipo.int/ipcreclassification/documentation/T03.06.01%20IS%20Working%20List%201.1.pdf> to see available information for filters

4.1.1.1.2. Information to be displayed

See ANNEX 1 [6.1.2] for functional requirements. See ANNEX 9 and 13 for technical specification and prototype to access MCD/OPS web services in order to get necessary data. See ANNEX 10 for available prototype to call available MCD/OPS SOAP web service. Technical documentation of web services is at <http://www.epo.org/patents/patent-information/free/open-patent-services.html>

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4.1.1.2. View status of reclassification

4.1.1.2.1. Selection criteria

See ANNEX 1 [6.2.1] for functional requirements.

4.1.1.2.2. Reclassification status

See ANNEX 1 [6.2.2] for functional requirements. See [4.3] for the workflow diagram and documents status.

4.1.1.3. Reclassify Document

See ANNEX 1 [6.3] for functional requirements. Access to RCL tab in IPCPUBPREP is described in ANNEX 11.

4.1.1.3.1. IPC symbol validation

Various options will be available to users for capture of IPC symbol and associated information (e.g. IPC version indicator).

For IPC symbol with several version indicators, the most recent should be used (e.g. during IPC 2011.01 reclassification if it was necessary to reclassify a document using the B62M 1/00 symbol see

<http://www.wipo.int/ipcpub/#&version=20110101&symbol=B62M0001000000¬ion=scheme&refresh=page&viewmode=f&level=a> , the IPC version indicator to be used would be 2010.01)

See ANNEX 1 [6.3.1] for functional requirements and See also under ANNEX 6, paragraph concerning version indicators.

- To perform direct input of one or many symbol(s) and associated information like the IPC version indicator directly and validation through the validation service prototyped under ANNEX 11
- To select symbol by symbol (necessarily valid) and the associated most recent version indicator from the IPC internet publication web site (IPCPUBPREP). . used <http://www.wipo.int/ipcpub> also under ANNEX 11
- To select one or more symbol(s) from those available in the RCL XML file for the corresponding IPC version see RCL under Annex 15 IPC Master files.

HTML and AJAX prototypes for interactive symbol selection are available under ANNEX 13.

4.1.1.4. View document bibliography, full text and images

See ANNEX 1 [6.4] for functional requirements. See ANNEX 10 for technical specification of the interface with the Esp@ceNet website.

4.1.1.5. View the scheme

See ANNEX 5.1 [6.5] for functional requirements.

4.1.1.6. Mark reclassification as completed

See ANNEX 1 [6.6] for functional requirements. See [4.3] for the workflow diagram and documents status.

4.1.1.7. Create, add document to Result Lists

See ANNEX 1 [6.7] for functional requirements. Documents can be added by offices for the purpose of correction. In this case, every information needed to identify a Document is captured and all actions under “reclassify Document” and “IPC symbol validation” are performed. The IPC revision project number is used to ensure unique identification of WL and RL items. As corrections do not have a project revision number, a convention is used to ensure this uniqueness.

4.1.1.8. Transfer Document to another office

See ANNEX 1 [6.8] and 1 [7.5.1] for functional requirements. In IPC reclassification stage 1, WIPO users can allow “transfer of reclassification responsibility” for a Document to other offices i.e. to allow an office other than the one in charge of reclassification (i.e. the one indicated by the MCD during stage 1 of the reclassification), to reclassify the Document. During this stage 2, any office that has a Document in the patent family of the Document to be reclassified can perform reclassification of the document on behalf of the family. To minimize the risk of conflict, in such situation, the first office performing reclassification will disable “transfer of reclassification responsibility” to other offices.

This is envisaged through the use of the family identifier for the corresponding Document.

Each document of the family is added to the corresponding office WL (i.e. for this family, several WL items will be present in the repository) and the first item reclassified will trigger automatic deletion of the other items using their common patent family identifier.

4.1.1.9. Uploading a Result List

See ANNEX 1 [6.9] for functional requirements. When an XML result list is uploaded, it is first stored in IPCRECLASS buffer and checked by the service. If the checking is successful, this XML result list is uploaded as Result List in the service and follows the same publication process as IPCRECLASS Result List (i.e. published under <http://www.wipo.int/ipcreclassification/> an alert email is sent to the MCD to inform about this. See error handling below for other situations.

4.1.1.10. Statistics

See ANNEX 1 [6.10] for functional requirements.

4.1.2. Controls

In order to check symbol validity a REST web service is available in IPC web site

<http://www.wipo.int/ipcpub/>.

See ANNEX 11 to get technical details about this web service and a prototype of symbol check.

For corrections (and not for the purpose of revision) existence of documents in the MCD will be checked with MCD/OPS SOAP web service. See ANNEX 9 for technical specification to

access to MCD/OPS web services. See ANNEX 10 for available prototype to call available MCD/OPS SOAP web service. Technical documentation of web services is at <http://www.epo.org/patents/patent-information/free/open-patent-services.html>

Delays between consecutive accesses to MCD/OPS should be considered in particular for validations in batch (this is for this reason that checking is only applied to corrections which are expected to less numerous than reclassification for the purpose of revision) XML result files are checked against the corresponding DTD (see Annex 3).

4.1.3. Reclassification errors handling

For on-line reclassification, most of the errors should be detected during on-line validation and checking. However, for errors detected at the time of upload in the MCD or for rls sent to the service, error management is needed.

In case of errors, error files containing only documents with errors either detected by the service or by the MCD, are generated and centralized by the service and sent back by email to the responsible office (by the service).

For on-line reclassification through the service, if errors are detected at the time of the upload in the MCD, error lists are returned by the MCD to the service which then sends them by email to the concerned office. For this purpose, the service includes a table of email focal points of contact per office (maximum 5 per office). A facility accessible to each office is needed inside the service to get this table maintained (i.e. each office is responsible for keeping their list of email focal points of contact up to date). However, WIPO can update any of these emails.

The robot must be modified to make it put error files in IPCRECLASS buffer. Then, IPCRECLASS will load errors in the repository, publish the error files in the secured part of the reclassification website http://www.wipo.int/ipcreclassification/restricted_area/ and send a notification email to the responsible office.

4.1.4. Monitoring

Monitoring information will be available depending of type of users to follow IPC reclassifications:

Users from countries office will see:

- The amount of documents to reclassify,
- The amount of documents already reclassified

Users from WIPO will see:

- The total amount of documents to reclassify,
- The total amount of documents already reclassified,
- The amount of documents to reclassify per office,
- The amount of documents already reclassified per office,
- The amount of documents to reclassify per office and per project,
- The amount of documents already reclassified per office and per project,

4.2. Technical requirements

4.2.1. Infrastructure

4.2.1.1. File formats

WLs and RLs will be submitted in XML format (wls and rls) which is currently used for IPC reclassification as the starting point (see [3] and [4]). Some extensions to the wl/rl format may be needed, specifically:

For XML result list files: the Revision project number would be stored in file names
Errors file format are described under [5].

4.2.1.2. Location of working lists and results files

It should be possible for the user to work on data either:

- a. directly in the reclassification repository and
- b. Locally by downloading the XML working list files, and storing result XML files locally until ready for upload to the repository.

4.2.1.3. Linking to other applications

It should be possible to link to tools such as Esp@cenet (or OPS), in order to view the document being reclassified (in the case of Esp@cenet, the type of data available is restricted to that which is currently available). It should also be possible to link to other websites for viewing other schemes or national collections.

4.2.1.4. Use of browser

In order to avoid the need for local installation, a browser based application is the preferred method of access to the reclassification service.

Browser support:

The list of browsers that the service should support is ...e.g. (Internet Explorer 7 and higher, Firefox 3 and higher)

4.2.2. Software architecture

A web based 3/3 software architecture will be used. A MYSQL database server will be connected to a web application server over a web HTTP server. As initial plan PHP 5 is envisaged for the implementation of the service.

4.2.3. IT security, User authentication and authorization to reclassify

The data of the repository are considered as non-sensitive information.

WIPO IT security policy for web application will apply. The availability of the service should be 7/7, 24 hours. However no support is required outside Geneva working hours. The service will be unavailable for regular maintenance during a four hours window per week to be detailed.

Only one type of user authentication is needed for all functionalities in the service. For this purpose, the service will interface an existing LDAP repository already updated with user logins through a CAS server.

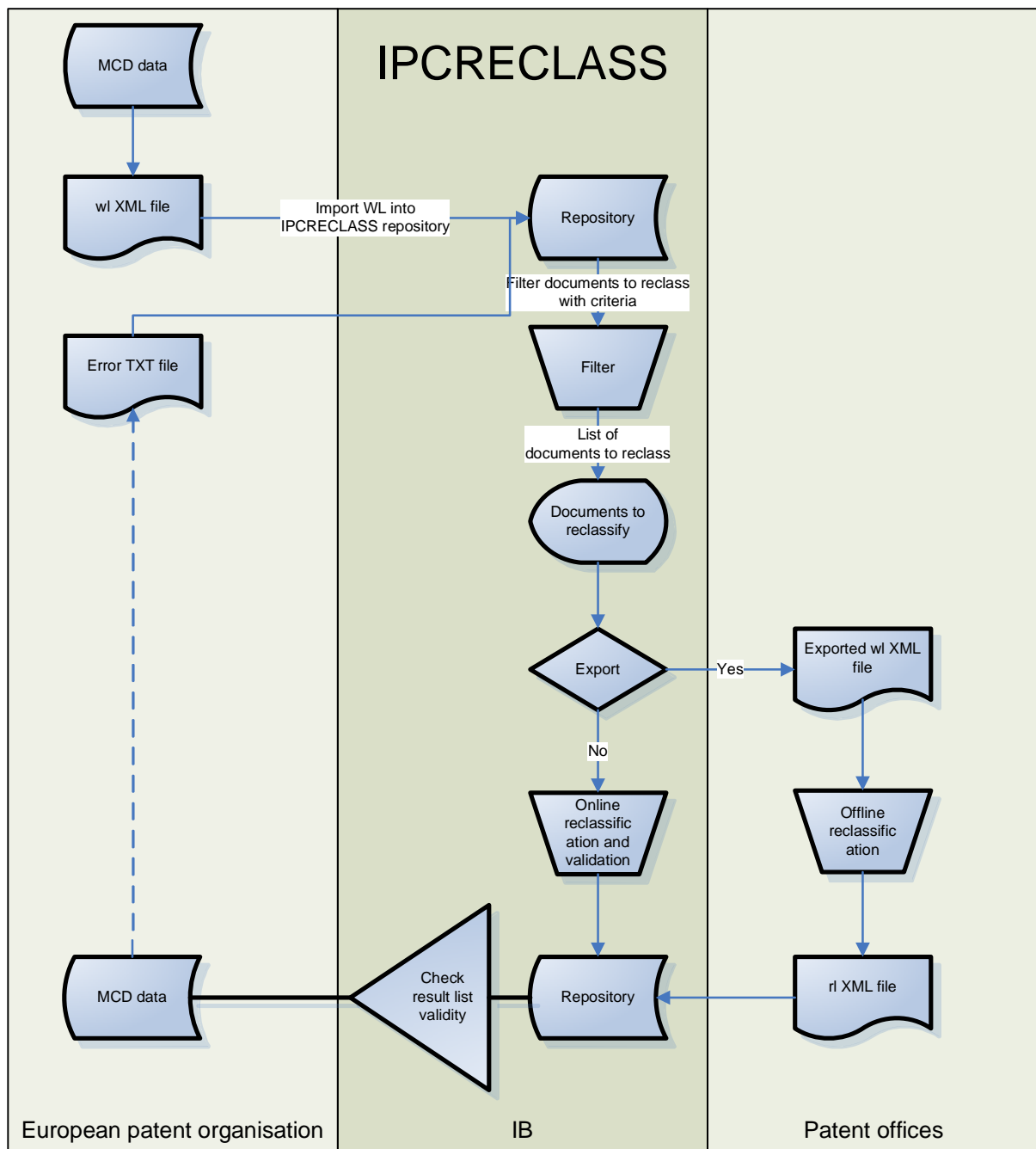
4.2.3.1. Reclassification for the purpose of revision:

By default, Document reclassification for the purpose of revision is authorized by the service if the logged-in office is the same as the office responsible for the reclassification of the family or is one of the offices that have a Document in the family of the Document to be reclassified.

4.2.3.2. Reclassification for the purpose of correction

Document reclassification for the purpose of correction is authorized only for documents of the logged-in office.

4.3. Workflow diagram

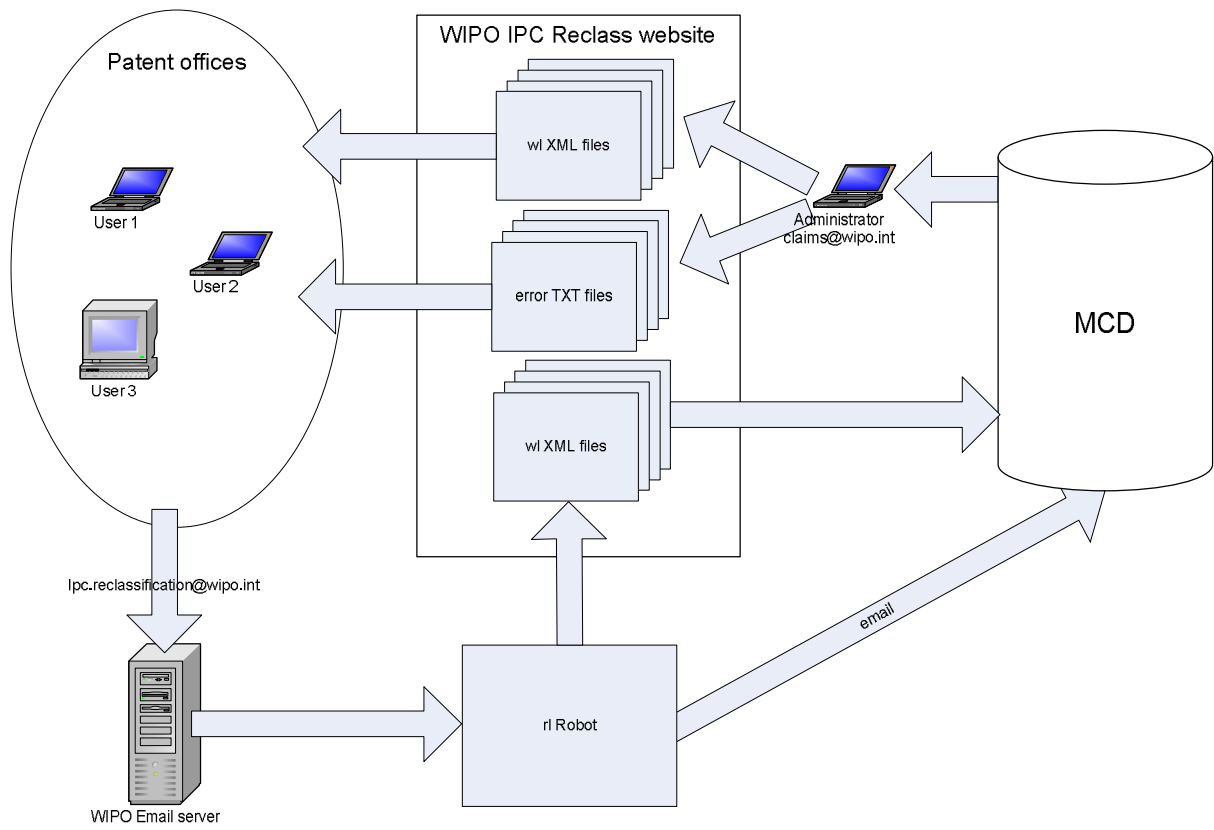


4.4. Architecture

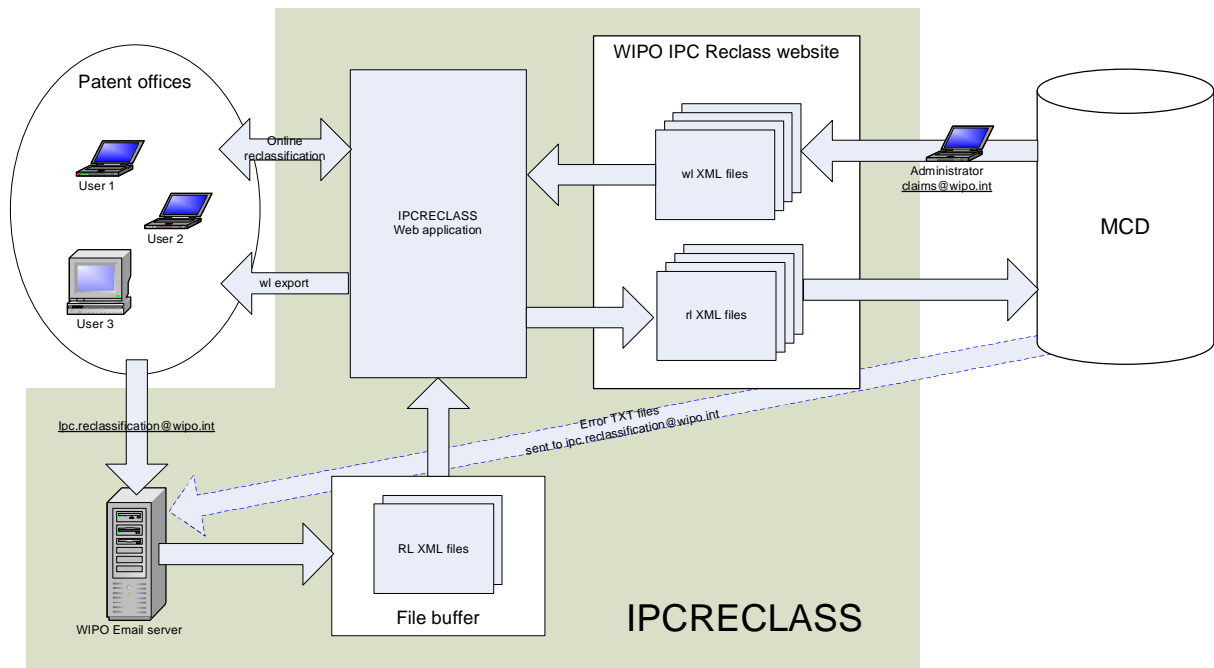
4.4.1. Constraints

The reclassification protocol based on XML file exchange and emails used until IPC 2010.01 will be preserved by IPCRECLASS

4.4.2. Current architecture



4.4.3. Planned architecture



5. STATEMENT OF WORK

IPCRECLAS implementation is based on the modification of existing components and the implementation of new ones.

The specification and implementation works will be done stage by stage as part of a project under the supervision of ITOS and following a Prince 2 like methodology.

Contacts with other WIPO staff will be organized and planned as necessary based on contractors requests preferably during ITOS weekly meetings and resulting actions managed under the ITOS4IPC instance of JIRA system used for follow-up.

5.1. Deliverables of WIPO to Contractor

WIPO will deliver all documentation mentioned in this Terms of References, the whole legacy reclassification web application PHP source code with its MySQL database backup (including reclassification data at a given point in time).

Test user database and email office focal points of contact will also be made available to Contractor.

5.2. Deliverables of Contractor to WIPO

Contractor will deliver to WIPO a project planning including at least the delivery of:

- IPCRECLASS functional and technical specification (i.e. what functionality fulfill each of the requirements and how it is technically implemented)
- Acceptance plan based on functional and technical specification for WIPO IT security audit
- Product source code and all installation and customization procedures for off-the shelf components (e.g. the database structure)
- A user guide in English in MSWord format, for transformation into HTML before inclusion as IPCRECLASS on-line help
- Technical documentation
- Acceptance report to be signed by WIPO and the contractor
- IPCRECLASS system according to approved specification.

5.3. Software development and system implementation life cycle

Contractor will develop the application using the framework indicated in the offer using version control system in use in ITOS (i.e. CVS).

The initial implementation is performed in WIPO development environment in which Contractor is able to test and identify all documentation needed for the deployment in the acceptance environment.

Acceptance of the installation procedure is performed by ITOS staff in cooperation with WIPO IT staff and Contractor in the acceptance environment. It is planned by Contractor with sufficient notice (at least one week) to check staff availability.

Functional acceptance is performed and reported in presence of users, ITOS staff and Contractor against the above mentioned acceptance plan.

Once accepted by users, IPCRECLASS IT security audit is performed on the basis of a stable version installed in acceptance. IT security problems will be fixed by Contractor until WIPO IT security find IPCRECLASS acceptable for installation in production environment.

Installation in the production environment is just a redo of the installation in acceptance and must not require Contractor's presence.

5.4. Change management

All changes will have to be tested in development and acceptance environments.

./ 6. ANNEXES

End of document