Use Case Specification UC01C10b Changing Object (GIS)

Version
1.1

Author(s)
Piet van der Krieke
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Contractor
National Land Centre

Status
FINAL

Distribution

History (version)

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<th>Date</th>
<th>Author</th>
<th>Remark</th>
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<td>18-11-2009</td>
<td>Piet van der Krieke</td>
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<td>27-01-2010</td>
<td>Piet van der Krieke</td>
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<td>0.3</td>
<td>19-05-2010</td>
<td>Piet van der Krieke</td>
<td>Adding user requirements</td>
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<td>03-12-2010</td>
<td>Piet van der Krieke</td>
<td>Finalizing</td>
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<td>25-03-2013</td>
<td>Piet van der Krieke</td>
<td>Changes Integration with GIS</td>
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History (review)

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National Land Centre of Rwanda
Land Registration Reform Project

Date
25-03-2013

Title
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Version
1.0

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1 Introduction

1.1 Short description
This document describes the global specifications of use case UC01C10b, Changing Object boundaries. This Use case is a sub flow of the Use Case UC01C Processing Administrative Document. The purpose of this use case is to make it possible for the user to change boundaries of an existing Object in the GIS part of the System and as a part of it, the area will change if recalculated. The actor in this use-case is the GIS expert.

1.2 Precondition of Use Case
An (accepted) Administrative Document with a change for the boundaries of an Object.

1.3 Postcondition of Use Case
The Administrative Document is Processed or Accepted and the area will be available on request.

1.4 Additional Requirements
Authorisation; the user is the employee of the ORLT. There should be authorisation for this job

Remarks.
There are different attributes of an Object. Depending of the kind of Administrative Documents, one or more of the Attributes can be changed. In this case from GIS side only the area of the parcel can be changed, caused by a change of the boundaries.

Additional Information
2 Sequence of Events

This is the main flow of this use case. (no flow will be added, because this is almost equal to split and merge)

1. Workflowlist is available in GIS environment.
2. GIS. Pick an Administrative document from the GIS workflow in LAIS.
3. GIS. Select the old Parcel in the actual layer and make it available in the provisional layer, together with the surrounding parcels, if the fiche cadastral of the parcel, changes the general boundaries into fixed boundaries (fixation of boundaries)
4. GIS. Change the boundaries of the regarding parcel and connect the boundaries of the surrounding parcels
5. Look if fixation of the boundaries will not change the regarding parcel and the neighbouring parcels too much.
   5.1. If it's OK go to 6
   5.2. If not, the transaction should be canceled and the surveyor has to go back in the terrain
6. GIS. Send information to LAIS adm by the use of the Adm Web-service: Change parcel boundary service
7. ADM. Recieve information from LAIS GIS and check information
8. ADM. Add an Object Annotation with the Object Annotation code 'BC' (boundary change) for all the affected parcels.
9. ADM. Answer LAIS-GIS with the result of the Adm part of transaction. Succesfull or errormessage
   9.1. Error message will be given if something went wrong in one of the steps 7-8
   9.1.1. UPI (of changed parcel or affected parcel) doesn't exist (at information check)
   9.2. Transaction will be rolled back at admin side if not succesfull
   9.3. Successful message will be given if transaction in Admin is done well
10. ADM. Send administrative document to processed, the status of the Administrative document will change to processed.
11. ADM. Stop transaction.
12. GIS. Will check information received from Admin
13. If information of Admin is: not succesfull: LAIS GIS will show the user: Problem with change boundary in Admin.
14. if information of Admin is: succesfull: GIS will save changes in GIS admin
15. GIS will inform user: Transaction succesfull
16. GIS. Stop Transaction

Other flows.
GIS and Admin act as one systems, but are running on different platform. It's possible that the connection between the systems breaks. The systems should be aware of that and in the cases that it happens, inform the user or in some cases roll back the transaction.
1. At calling webservice Change boundary service: If LAIS adm is not available, the GIS user should be informed. The transaction is not closed and the user has to try it again. (of course after some technical retries). A message should be showed to the user.

2. At answering the GIS after the transaction in LAIS adm: If LAIS GIS is not available, the transaction in LAIS adm should be rolled back. (of course after some technical retries). This will occur that a time out will occur at the GIS side (see next).

3. If a time out occurs while GIS is waiting for an answer on the call to the Split Service, the user should be informed that LAIS doesn't respond and that the results cannot be saved.

Changes made to the different entities.

The changed Object

<table>
<thead>
<tr>
<th>Object</th>
<th>Can be Changed</th>
<th>User or System</th>
</tr>
</thead>
<tbody>
<tr>
<td>The changed Object</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Object-identification</strong> (prim. key)</td>
<td>Not</td>
<td></td>
</tr>
<tr>
<td>Unique Parcel ID (sec key)</td>
<td>Not</td>
<td></td>
</tr>
<tr>
<td><strong>Object Change Administrative Document</strong></td>
<td>Regarding Administrative Document</td>
<td>System</td>
</tr>
</tbody>
</table>

**Parcel**

<table>
<thead>
<tr>
<th>Parcel-area (field will be removed from administrative part)</th>
<th>Yes (Recalculated)</th>
<th>User</th>
<th>Mandatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel Polygon</td>
<td>Yes</td>
<td>User in GIS</td>
<td></td>
</tr>
<tr>
<td>Last given Condominium Index Letter</td>
<td>Not</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An Object Annotation will be added at the affected parcels
### Overview User Requirements

<table>
<thead>
<tr>
<th>Object</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Object change Administrative Document</td>
<td>Regarding Administrative Document. If the boundaries of the object have been changed</td>
</tr>
<tr>
<td><strong>Parcel</strong></td>
<td></td>
</tr>
<tr>
<td>Parcel-area</td>
<td>Is in the GIS part, can be recalculated. It's also copied in the Adm part.</td>
</tr>
<tr>
<td>Parcel boundaries</td>
<td>In the GIS part</td>
</tr>
<tr>
<td><strong>Affected Parcels</strong></td>
<td></td>
</tr>
<tr>
<td>Parcel-area</td>
<td>Is in the GIS part, can be recalculated</td>
</tr>
<tr>
<td>Parcel boundary</td>
<td>In the GIS part</td>
</tr>
</tbody>
</table>