** Request for a change**

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| --- | --- |
| **Request ID** | **92** |
| **Title of the request** | **Creation of user profiles (version 3.1)** |
| **Relates to** | **Master Version** |
| **Submitted on** | **27/01/2019** |
| **Assessed on** |  |
| **Approved on** |  |
| **Status** | * **Submitted x** * **Assessed** * **Approved** * **Rejected** * **Processed** * **Implemented** |
| **Impact on costs**  **(man hours, man days)** |  |
| **Impact on schedule** |  |
| **Category of change** | * **Minor** * **Major** * **Principal** |
| **Comments of vendor** |  |

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| --- | --- | --- | --- |
| Revision history | Date | Author | Changes / remarks |
| 1.0 | 21.08.2018 | Jiri Nemec | Initial draft |
| 1.1 | 17.09.2018 | Jiri Nemec | Added searching of users according to a user profile |
| 2.0 | 02.10.2018 | Jiri Nemec | Unifying the concept of legacy roles and user profiles |
| 3.0 | 21.01.2019 | Jiri Nemec | Extension of the concept to the API layer and mobile apps |
| 3.1 | 27.01.2019 | Jiri Nemec | Adding functionalities of the payment module to the functional matrix |

**Description of the request**

# Introduction

User access rights are defined by means of roles in the current IMIS implementation. One or several different roles can be associated with a user. The roles are not overlapping. It means that a specific functionality of IMIS can be accessible only through one role. Functionalities associated with a role are selected based on typical needs of a profession participating on administration of a health insurance scheme (e.g. the role Accountant comprises access to functionalities associated with financial matters).

However, this approach has some limitations. Firstly, if there is a repeated need for assigning a set of roles it is not possible to give a name to the set of roles and assign this set based on this name. Secondly, sometimes is desirable to give to a user access rights that not fully fit into any set of available roles. As a consequence, there will be some access rights assigned to a person that eventually shouldn’t be.

To address this problem it is required to implement besides the current concept of defining user access rights also the concept of user defined roles (user profiles) defining a set of access rights quite generally. The old approach with fixed user roles matches with the generalized concept of user definable roles so that backward compatibility is preserved.

# Description of the solution

The required solution has the following features:

* The register of Roles accessible from the menu *Administration->Roles.* The register of roles is accessible within the role *IMIS Administrator.*
* The functionality associated with the register of roles comprises the following – adding of a new role, editing of a role, duplicating of a role, deleting of a role and searching for roles according to specified criteria.
* Associating of a user with one or several roles in the register of users (*Administration->Users*).

## Functionality associated with the register of roles

The following functionality should be available for the register of user profiles:

|  |  |
| --- | --- |
| Function | Description |
| Searching | Searching is done according to a prefix of the name of roles. Searching can be done both among only active roles or among all of them (it means also among deleted user profiles) |
| Add | Adding of a new role to the register. The name of the new role has to be unique. |
| Edit | Editing of an existing role in the register |
| Duplicate | Duplicating of an existing role. The selected role is duplicated in all data fields except for its *Name.* |
| Delete | Deleting of an existing role. |

**Design note**

Functionality associated with the register of roles is designed in accordance with design rules of other registers, It means a form *FindRole* for searching among roles with the usual setup, the usual approach to selecting of a found role and a form *Role* for defining detailed access rights within the role. The form *Role* has two buttons *Save* and *Cancel* with the standard meaning.

## The form Role

The form for a role serves for adding or editing of a role. It has one data filed *Name* for assigning of a name (title) of the role. The second part of form contains a two dimensional matrix of check boxes (or other functionally equivalent arrangement) split into the following sections[[1]](#footnote-1):

**HAS MORE THAN ONE MEANING** **SelectClaimForFeedback = 111009 EnterFeedback = 111009**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Section Insurees and Policies | Search | Add | Edit | Delete | Renew |
| Family/Group | 101001 | 101002 | 101003 | 101004 | N/A |
| Insuree | 101101 | 101102 | 101103 | 101104 | N/A |
| Policy | 101201 | 101202 | 101203 | 101204 | 101205 |
| Contribution | 101301 | 101302 | 101303 | 101304 | N/A |
| Payment | 101401 | 101402 | 101403 | 101404 | N/A |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Section Claims | Search | Add | Edit | Delete | Load | Print | Submit | Review | Feedback | Update | Process | Filter | Preview |
| Claim | 111001 | 111002 | 111003 | 111004 | 111005 | 111006 | 111007 | 111008 | 111009 | 111010 | 111011 | N/A | N/A |
| Batch | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 111101 | 111102 | 111103 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Section Administration | Search | Add | Edit | Delete | Duplicate | Move |
| Products | 121001 | 121002 | 121003 | 121004 | 121005 | N/A |
| Health Facilities | 121101 | 121102 | 121103 | 121104 | N/A | N/A |
| Pricelists- Medical Services | 121201 | 121202 | 121203 | 121204 | 121205 | N/A |
| Pricelists –Medical Items | 121301 | 121302 | 121303 | 121304 | 121305 | N/A |
| Medical Services | 121401 | 121402 | 121403 | 121404 | N/A | N/A |
| **Medical Items** | **122101** | **122102** | **122103** | **122104** | **N/A** | **N/A** |
| Enrolment Officers | 121501 | 121502 | 121503 | 121504 | N/A | N/A |
| Claim Administrators | 121601 | 121602 | 121603 | 121604 | N/A | N/A |
| Users | 121701 | 121702 | 121703 | 121704 | N/A | N/A |
| Payers | 121801 | 121802 | 121803 | 121804 | N/A | N/A |
| Locations | 121901 | 121902 | 121903 | 121904 | N/A | 121905 |
| User Profiles | 122001 | 122002 | 122003 | 122004 | 122005 | N/A |

|  |
| --- |
| Section Tools |

SECTION NO. 130000

NOT IN LEGACY (NEW) 141002

|  |  |  |
| --- | --- | --- |
| Subsection Registers | Upload | Download |
| Diagnoses | 141001 | 141002 |
| Health Facilities | 141101 | 141102 |
| Locations | 141201 | 141202 |

NO MAPPING 151501

NO MAPPING 151401

NO MAPPING 151201

NO MAPPING 151101

NO MAPPING 151001

|  |  |  |  |
| --- | --- | --- | --- |
| Subsection Extracts | Download | Upload | Create |
| Master Data | 151001 | N/A | N/A |
| Phone Extracts | N/A | N/A | 151101 |
| Offline Extract | N/A | N/A | 151201 |
| Claims | N/A | 151301 | N/A |
| Enrolments | N/A | 151401 | N/A |
| Feedback | N/A | 151501 | N/A |

NOT IN LEGACY (NEW) 160003

NOT IN LEGACY (NEW) 160004

NOT IN LEGACY (NEW) 160006

NOT IN LEGACY (NEW) 160002

|  |  |
| --- | --- |
| Subsection Reports | Preview |
| Primary Operational Indicators-policies | 160001 |
| Primary Operational Indicators-claims | 160002 |
| Derived Operational Indicators | 160003 |
| Contribution Collection | 160004 |
| Product Sales | 160005 |
| Contribution Distribution | 160006 |
| User Activity Report | 160007 |
| Enrolment Performance Indicators | 160008 |
| Status of Registers | 160009 |
| Insurees without Photos | 160010 |
| Payment Category Overview | 160011 |
| Matching Funds | 160012 |
| Claim Overview | 160013 |
| Percentage of Referrals | 160014 |
| Families and insurees Overview | 160015 |
| Pending Insurees | 160016 |
| Renewals | 160017 |
| Capitation Payment | 160018 |
| Rejected Photos | 160019 |
| Contribution Payment | 160020 |
| Control Number Assignment | 160021 |

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| --- | --- |
| Subsection Utilities/Email setting |  |
| Backup | 170001 |
| Restore | 170002 |
| Execute Script | 170003 |
| Email Setting | 170004 |

|  |  |
| --- | --- |
| Subsection Funding |  |
| Save | 180001 |

## Legacy roles

Current (legacy) roles will be converted into not editable roles according to the new concept. So they will be inserted into the register of roles, they can be searched for, they can be displayed in the form *Role* but they cannot be edited nor deleted.

## Additional functionality associated with the register of users

* The current box *Role* will contain all available roles from the register of Roles including the user roles corresponding to the legacy roles. The user roles corresponding to the legacy roles will be displayed first in the box *Role* and in the same order as now. A user can select (check) any combination of available roles.
* The box *Role* is equipped with a shift bar.
* The drop down list associated with the search data field *Roles in the form FindUsers* is enriched with all available roles (including legacy roles). Searching of users provides all users having the specified role.

The following functionality is associated with assigning of a user profile to a user:

* Access rights associated with a user are a union of access rights included in all roles assigned to the user.
* If functionality associated with a menu/submenu item is not marked as available for a user (is not included in the union of roles assigned to him/her) the menu/submenu item is faded. If functionality associated with a button is marked as not available for a user (is not included in the union of roles assigned to him/her) then the button is not displayed in the corresponding form.

## Extension of the concept to the API layer and mobile apps

Access rights associated with a user extend to:

a) functions of the API layer in the following sense: if an API function corresponds to a functionality according to the chapter 2.2 and user credentials are required for calling of an API function then the API function is performed only if the user’s encompasses the corresponding functionality. If it is not the case the API function responds with a uniform error code – see RfC 72.1 version 2

b) functions of mobile phone applications: in the following sense: if a function is provided in the situation when user credentials are known to a mobile application and the user’s role doesn’t encompass a functionality then a control element (menu item/functional button) allowing the corresponding functionality is not accessible to the user (e. g by fading, generally in the way compatible with the web interface of IMIS)  
2) A slightly different situation is with the mobile applications. Here the logic is slightly different. Entitlements of a user are known only if a user asks access ( by a login process) to the core IMIS. After that any functional menu item/ button can be faded in case the corresponding functionality is not available within his/her profile. The RfC 92 needs an extension to the mobile phone applications in this respect. However, IMIS mobile apps don't know entitlements before going to IMIS. So, for example the menu item Control Numbers appears not faded when a user starts the application. Here some Feature Switch could have a justification but looking at the deposit of not implemented RfCs I don't  see it as a priority

## Adjustments of the data model

1) The new entity *Role* is added (actual content of the table can be optimized :

|  |  |  |
| --- | --- | --- |
| **Name of entity: Role** | | |
| Name of attribute | Description | Values |
| Name | Self-explanatory | Alpha |
| System | Indication whether the role is a system legacy role or not | Yes/No |
| Functionality | The list of available functionalities. | Y/N |

2) The entity *User* is enriched by a reference to the set of roles assigned to the user:

|  |  |  |
| --- | --- | --- |
| **Name of entity: User** | | |
| Name of attribute | Description | Values |
| Last name | Self-explanatory | Alpha |
| Other names | Self-explanatory | Alpha |
| Phone | Self-explanatory | Numeric |
| Email | Self-explanatory | Alphanumeric |
| Username | Username for login | Alphanumeric |
| Password | Password for login | Alphanumeric encrypted ( e.g. by MD 6) |
| Language | Language of user interface |  |
| Roles | Roles of the user | Reference to a list of roles-see tab 1 |
| Roles | Set of roles associated with the user | Reference to a support table containing assigned roles |
| Region | Indication data of which region should be available. If empty all data are available | Reference to *Region* |
| District | Indication data of which district should be available. If empty all data of the specified region are available. | Reference to *District* |
| Health facility | If given, the user can submit and access claims only relating to given health facility | Reference to *Health facility* |

# Migration

The release containing this request for change will be accompanied by a migration script that loads the roles corresponding to the legacy roles into the register of roles and converts association of a user with legacy roles to the association of the user with corresponding roles loaded in the register of roles.

1. N/A – not applicable in given context. There is no checkbox. [↑](#footnote-ref-1)