Requirements Document for Co-opMeeting

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Glossary

3G is the third generation of mobile telecommunications technology. 3G telecommunication networks support services that provide an information transfer rate of at least 200 kbit/s up to several Mbit/s to smartphones and mobile modems in laptop computers. 16

Account describes the privileges for registred users. 9–11

Admin User administartes and maintains the system. 11

Alias is the displayed user name in a session. 9

Anonymous User is someone who is not registred to the system and therefore has no user account. 9

Blacklist is a list or register of entities who, for one reason or another, are being denied a particular privilege, service, or access. 11

Cache is a mechanism for temporary storage of web documents to increase performance. 16

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Codec a codec is a way to en-/decode datastreams for better performance, wider support or higher security. 16

Installed Plugins are plugins which are approved by an admin user and installed on the server, so that every regular user can use them. 9–11

Invitations are used to ask regular users to join a session. 10

Keys are used to invite anonymous users to a session. 10

Michael's smartphone is an old outdated smartphone that is only capable of running Android 2.2. 16

Moderator is a regular user. Moderators can restrict the privileges of reular users. 10, 11

Plugins are software components that add a specific feature to an existing software. 10, 11, 16

Ports are application-specific or process-specific software constructs serving as communications endpoints in a computer's host operating system. 15

Registration is the process of craeting a new user account. 9

Regular User is someone who is registred and has an account. 9–11

Session can be a text based chat, telephone or video conference. 9, 10, 16

Tunneling is the process of encapsulating one network protocol within another network protocoll to circumvent the problems of incompatible delivery-networks and creating secure Connection. 15

UTF-8 allows the representation of every existent character. 16

Contents

Part I

User Requirements

UR001

Statement *An Anonymous User may be invited to any Session by a key from Regular Users.*

Priority *A*

UR002

Statement *An Anonymous User shall be able to use Installed Plugins for the Session he is invited to.*

Priority *A*

UR003

Statement *An Anonymous User shall be able to register at the server, if Registration is possible.*

Priority *A*

UR004

Statement *A Regular User must register with a valid email address.*

Priority *A*

UR005

Statement *A Regular User shall be able to login with his email address and password.*

Priority *A*

UR006

Statement *A Regular User shall be able to change his password and/or Alias.*

Priority *A*

UR007

Statement *A Regular User shall be able to delete his own Account.*

Priority *A*

UR008

Statement *A Regular User shall be able to open Sessions.*

Priority *A*

UR009

Statement *A Regular User shall be able to join any Session he is invited to.*

Priority *A*

UR010

Statement *A Regular User shall be able to close Sessions he has the rights to.*

Priority *A*

UR011

Statement *A Regular User shall be able to create and distribute Keys and send Invitations to every Session he has the rights to.*

Priority *A*

UR012

Statement *A Regular User may activate or deactivate Installed Plugins.*

Priority *A*

UR013

Statement *A Regular User shall be able to request installation of new Plugins.*

Priority *A*

UR014

Statement *A Moderator shall be able to restrict privileges of Regular Users, if a Regular User misbehaves like insulting others, uploading inappropriate content or harming the system.*

Priority *A*

UR015

Statement *A Moderator shall be able to restore privileges of Regular Users.*

Priority *A*

UR016

Statement *A Moderator shall be able to suspend Accounts of Regular Users for a certain amount of time.*

Priority *A*

UR017

Statement *An Admin User shall be able to reset passwords for every Account, if a Regular User, a Moderator or an Admin User forgot the password.*

Priority *A*

UR018

Statement *An Admin User shall be able to test Plugins requested by a Regular User.*

Priority *A*

UR019

Statement *An Admin User shall be able to install tested Plugins.*

Priority *A*

UR020

Statement *An Admin User shall be able to remove previously Installed Plugins.*

Priority *A*

UR021

Statement *An Admin User shall be able to add Plugins to a Blacklist, if they may harm the system.*

Priority *A*

UR022

Statement *An Admin User shall be able to remove Plugins from a Blacklist, if they were accidentally added.*

Priority *A*

Part II

System Requirements

Chapter 1

Non-Functional Requirements

1.1 Product Requirements

1.1.1 Usability Requirements

1.1.1.0.1 NFR001

Statement *The website should be usable with touchscreen devices.*

Priority *A*

1.1.1.0.2 NFR002

Statement *The website should support the most popular browsers such as Mozilla Firefox, Safari, Opera, Google Chrome and Internet Explorer.*

Priority *A*

1.1.1.0.3 NFR003

Statement *The service should prevent epileptic fits.*

Priority *A*

1.1.1.0.4 NFR004

Statement *The service should use Tunneling to provide its service when certain Ports are unavailable.*

Priority *A*

1.1.1.0.5   NFR005

Statement *The characters should be encoded using UTF-8*

Priority *A*

1.1.2   Efficiency Requirements

1.1.2.1   Performance Requirements

1.1.2.1.1   NFR006

Statement *The website should work on Michael's smartphone.*

Priority *A*

1.1.2.1.2   NFR007

Statement *Sessions should work with limited internet bandwidth (minimum of 3G) on mobile devices.*

Priority *A*

1.1.2.1.3   NFR008

Statement *The service should provide automatic scaling of the video size/quality based on internet bandwidth.*

Priority *A*

1.1.2.2   Space Requirements

1.1.2.2.1   NFR010

Statement *The Service should use lossless Codecs to reduce filesize.*

Priority *A*

1.1.2.2.2   NFR011

Statement *The Service must not exceed 20Mb of Cache on mobile devices.*

Priority *A*

1.1.3   Dependability Requirements

1.1.3.0.3   NFR010

Statement *The Login data and available Plugins should be redundant on multiple Servers*

Priority *A*

1.1.3.0.4 NFR011

Statement *The client should use Caching to minimize bandwith consumption*

Priority *A*

1.1.4 Security Requirements

1.2 Organziational Requirements

1.2.1 Environmental Requirements

1.2.1.0.5 NFR002

Statement *Users of the MHC-PMS system shall authenticate themselves using their health authority identity card.*

Priority A

1.2.2 Operational Requirements

1.2.3 Development Requirements

1.3 External Requirements

1.3.1 Regulatory Requirements

1.3.2 Ethical Requirements

1.3.3 Legislative Requirements

1.3.3.1 Accounting Requirements

1.3.3.2 Safety / Security Requirements

1.3.3.2.1 NFR003

Statement *The system shall implement patient privacy provisions as set out in HStan-03-2006-priv.*

Priority *A*

Chapter 2

Functional Requirements

2.0.3.2.2   FR001

Statement *On the last working day of each month, a summary of the drugs prescribed, their cost, and the prescribing clinics shall be generated. (see user requirement UR001)*

Priority *A*

2.0.3.2.3   FR002

Statement *The system shall automatically generate the report for printing after 17.30 on the last working day of the month. (see user requirement UR001)*

Prioriy *A*

2.0.3.2.4   FR003

Statement *A report shall be created for each clinic and shall list the individual drug names, the total number of prescriptions, the number of doses prescribed, and the total cost of the prescribed drugs. (see user requirement UR001)*

Priority *A*

2.0.3.2.5   FR004

Statement *If drugs are available in different dose units (e.g., 10 mg, 20 mg) separate reports shall be created for each dose unit. (see user requirement UR001)*

Priority *A*

2.0.3.2.6   FR005

Statement *Access to all cost reports shall be restricted to authorized users listed on a management access control list. (see user requirement UR001)*

Priority *A*

Chapter 3

Scenarios

3.1 Scenario for a research group conference

INITIAL ASSUMPTION: *Max, a member of an experimental physics research group, has found discrepancies between the simulated and actual behavior of a particle detection experiment (though the underlying physical processes are well known). Because the group is international, he wants to present his findings via the video conferencing tool. This includes the usage document sharing and of a whiteboard with the possibility to place supported graphical files on it. He and other participants want to draw on the whole whiteboard to accentuate their explanations. All research group members are already regular users and part of a common group within the tool. The group has registered a fixed date for the meeting and activated the reminder function with a set time distance to the meeting date.*

NORMAL: *At the set notification time, all group members get a notification email and, if they have the application open at that time, also a notification popup window within the tool. Before the meeting date, Max opens a new session and, as the moderator of the new session, invites the whole group to it by the 'Invite Group' function. All members that are already online within the tool, get a popup window that asks whether they want to participate. Those that are not online get an email that tells them about the invitation. When all members that want to participate are online and part of the session, Max begins to talk and uploads some supported graphics files containing research data plots. All session participants can access this files now. Max opens a new whiteboard, which is now visible to all participants. He selects one of the graphics files to be displayed on the whiteboard and starts to draw on top of the graphics to help the others to understand his explanations.*

WHAT CAN GO WRONG:

OTHER ACTIVITIES:

SYSTEM STATE ON COMPLETION:

3.2   Scenario for recording a session

INITIAL ASSUMPTION:

NORMAL:

WHAT CAN GO WRONG:

OTHER ACTIVITIES:

SYSTEM STATE ON COMPLETION: