



Project Acronym: ExCITE
Project Title: Enabling Social Interaction through Embodiment
Starting date: 1st July 2010
Ending date: 31th December 2013



D5.1 Annual Technical Report on Communication Enhancement M36

WP related to the Deliverable:	WP5
Nature:	Report
Dissemination Level :	P
Version:	2.0
Author(s):	Andrey Kiselev, Amy Loutfi, Stephen von Rump
Project Participant(s) Contributing:	ORU
Contractual Date of Delivery:	M36
Actual Date of Delivery:	M36

Deliverable Summary

This deliverable describes the work which was done on the communication enhancement of the Giraff mobile robotic telepresence system until the month 36. Communication enhancements are a key feature of the Giraff platform and the objective of the technical work on communication is to technically support GRF in implementing communication and infrastructure requirements that adhere to standards for interoperability. This work comprises has the following specific objectives :

- To provide Giraff with communication technologies that adheres to eventual user needs. To improve UI and networking security in order to allow restricted access to the Giraff.
- To enhance general functionality, natural feel and experience of the Giraff by ensuring reliable communication

Therefore the work described here is also tightly interwoven with WP2 which provides the technical recommendations and lifts possible issues related to the communication.

Table of Contents

1	Introduction	4
1.1	Scope of the document	4
1.2	Purpose of this Deliverable and Special Circumstances with WP5	4
2	An Overview of "Communication" in the Giraff platform	5
3	Broaden available solutions for communications	6
3.1.1	The problems	6
3.1.1.1	Internet Network Quality	7
3.1.1.2	Wireless Networking	8
3.1.2	Implemented Solutions	8
3.1.3	Case from a testsite	10
	Connecting to Giraff from a 4g connection.....	14
4	Call answer security	15
5	Call initiation from the unit	16
6	Audio and video improvements	18
6.1	The problems.....	18
6.2	The Solution.....	19
7	Investigation of possibility of adaptation of pilot to different platforms	20
8	Conclusions	20
9	Appendix 1	22
9.1	Giraff Personalities	22
9.1.1	Creating a new Giraff personality	22
9.1.2	Editing a Giraff personality	22
9.2	Changing visitor permissions	24
9.3	Reassigning a Giraff	25

1 Introduction

1.1 Scope of the document

The main objective of the ExCITE project is to evaluate user requirements of social interaction that enables embodiment through a robotic telepresence system, called Giraff. An existing prototype has been deployed to the targeted end-users, and is continuously refined by tightly involving the users in the development cycle.

This document describes the integration and specification of the Giraff system at the month 36.

1.2 Purpose of this Deliverable and Special Circumstances with WP5

As it was reported in the Request of Extension for the ExCITE AAL Project Call 2, one of the partners in the project consortium – RatioConsulta has never received funding and thus had to cancel its participation in the project. At the same time, the contributions from the RatioConsulta are extremely important for the project. This lead us to the decision to redistribute the tasks from the WP5 between active consortium members and fulfill entirely project plan. The current deliverable is based on the revised description of the WP5 in the form it appears in the Request for Extension. Briefly, the content of the WP5 is as follows:

Task 5.1 Broaden available solutions for communications – This is the task of adapting common communication solutions to the Giraff to the requirements of the user. These may be generic requirements such as finding technologies to enable better telecommunication hardware networks such as 3G/4G. In addition there should be a stable solution when multiple routers are present and the Giraff need to switch from one to the other. (ROC, GRF)

Task 5.2: Call answer security – As the Giraff allows users to be embodied in a remote location, security is crucial in order to restrict which users can access the robot. Finding means to verify user identity and permit authorized access will be part of this task. (ROC, CNR)

Task 5.3: Call initiation from the unit – When a client connects to the Giraff, end-users need to be able to control how calls are initiated and handled. This task will focus on how to accept/reject calls via services. - This task needs to include the ability to choose who the end user is calling. It should also incorporate how the person being "called" is to be notified. Possible options could include sending a SMS or telephone call at the computer and "hunt group" techniques. (ROC, GRF)

Task 5.4: Audio and video improvements – This task involves implementing the requirements on audio/video communications to fulfill user's eventual need for increased levels of 'natural interaction'. This includes aspects such as audio echo cancellation as well as video/audio decoding techniques that will provide better video image quality, possibly to include zoom functionality (ROC, GRF).

Task 5.5: Investigation of possibility of adaptation of pilot to different platforms – In this task the possibility to adapt the pilot software to run in other platforms beside a windows computer is investigated. This includes running on Mac computer and on Apple devices. This task investigates

alternative possible ways to achieve multiple platform pilot software and investigate the technical challenges related to that. In particular the possibility of switching to a different video codec needs to be investigated. (ROC, GRF).

The role of ROC in the deliverable has therefore been replaced by the other partners, namely ORU and CNR. CNR has contributed by collecting and funneling specific recommendations regarding communications. ORU has contributed in part to the elicitation of the user requirements for Communication enhancements and some of the technical development which is later integrated into the final Giraff platform. Some of the work that is presented below is inevitably an integral of other deliverables such as WP2 on the technical recommendation and WP3 on the specifications of the Giraff platform. In general, however, the aim of this deliverable is to show the effort to achieve the following objectives:

- To provide Giraff with communication technologies that adheres to eventual user needs. To improve UI and networking security in order to allow restricted access to the Giraff.
- To enhance general functionality, natural feel and experience of the Giraff by ensuring reliable communication

2 An Overview of "Communication" in the Giraff platform

The purpose of the Giraff solution is to connect elderly with their world and allow them to communicate naturally and conveniently even when face-to-face visits are not practical. Therefore communications lies very much at the core of the successful Giraff experience. Internet "backbone" network quality is obviously a key element to the overall experience and fortunately has not generally been a problem for the Giraff. Most network quality problems arise either from the local access (cable, fiber, DSL, etc) or the local wireless networking. To gain an overview of the points of communication Figure 1.

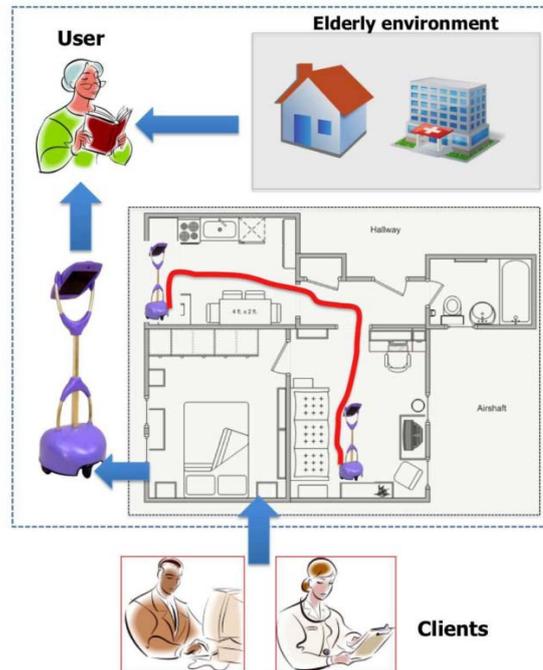


Figure 1 Points of communication between the home and the clients. Between the client and home is also the sentry database, communication between Giraff and Client is based on a teleconferencing tool called VSee.

Communication Giraff and the Local Network: The Giraff robot is typically located in the home and connected to a wireless local area network. This means that there needs to be a robust communication between the unit and the router in the home.

Communication between the router and the Sentry Database : This is dependent on the configuration in the home and available service provider in the country. This communication is not part of the development work but clearly the solution provided in ExCITE is dependent on a good and stable infrastructure.

Communication between the Sentry and the available Giraffs: To call a Giraff, Sentry manages units and users. This means that there is an implicit communication between the sentry database which must keep track of the addresses of each physical Giraff robot, so that when it a Giraff is called it can indeed be found.

Communication between the Client and Sentry: The Clients which connect to a robot must go via Sentry and and therefore there needs to be a communication between the client computers and the Sentry database.

3 Broaden available solutions for communications

3.1.1 The problems

3.1.1.1 Internet Network Quality

Modern Internet technologies allow users to take advantages of HD quality media just through the Internet services. However, it is needless to say that Internet connection (mainly bandwidth and lag) is not always stable and reliable. There are variation among Internet service providers (ISPs) and counties. For example, according to the widely used OOKLA net index, the following average numbers by country can be found for all countries which participate in ExCITE project (see Tab. 1).

	Broadband connection		Mobile connection	
	Download speed, Mbps	Upload speed, Mbps	Download speed, Mbps	Upload speed, Mbps
Sweden	41.1	21.1	13.0	4.6
Spain	19.9	4.7	9.9	3.7
Italy	7.8	1.7	6.9	2.4

Table 1: Internet speed statistics by country

From the Tab. 1 it can be seen that the average download speed and average upload speed of broadband connection in Italy is lower than the corresponding parameters for mobile connections in Sweden. Currently, the Giraff system requires at least 0.5Mbps speed in each direction. Thus, looking only at average speed it might look that Giraff is capable to work using the normal mobile 3G connection. This is actually true and it was verified by the internal tests conducted by GRF. But at the same time, there are factors caused by instability of cellular networks, that prevent using 3G Internet connection directly on the robot on a regular basis. Giraff system uses secure connections and every time the connection between Giraff and Pilot becomes unstable, the visit must be reinitiated to establish new security session. This does not happen to the systems that do not provide stream encryption. At the same time, it must be noted that wireless and cellular networking technologies are growing very rapidly. It is expected that LTE coverage in all EU countries will become sufficient in the next several years. This will also bring a variety of new cellular-usb modems which can be potentially used with Giraff. Poor network quality may have the following effect on the device:

Not surprisingly, network quality is a major factor in the overall Giraff user experience. Latency (the time it takes for a packet of data to arrive at its destination) and throughput (the average bit rate of the Giraff stream as measured in Kb/s) are the two most important measures. Throughput problems are usually manifested first in video quality, with slow frame rate, images breaking up and in the worst case, frozen images. More severe bandwidth limitations also affect audio quality, resulting in garbled or broken speech, and in the worst case loss of audio altogether.

Latency problems are usually manifested in the navigation of the Giraff. For safety reasons the Giraff continuously measures latency between itself and the Pilot visitor, and thus calculates the “age” of a navigation command such as “move forward.” If a command exceeds a certain age (currently set to 500 ms) the Giraff assumes the Pilot visitor is receiving an “old” video image and

does not know the Giraff's current position, and therefore disregards the command. As a result, the effect of long latency manifests itself as a jerky, "balking" motion in the Giraff, and in the worst case the Giraff will not move at all.

3.1.1.2 Wireless Networking

Wireless network has created a number of challenges for the Giraff application and the ExCITE project in general. We outline the issues here:

- Most Windows devices (PCs and laptops) use standard wireless configuration that allow them to join wireless networks without intervention by the user except to enter a password. The Giraff is a Windows device and the wireless utility operates in the same way as any other. However, because the Giraff allows virtual entry into a home, security and privacy are even greater issues than with other Windows devices.
- Currently the Giraff uses the 802.11 standard which operates at 2 frequencies, 2.4 and 5GHz. The 2.4 band is by far the most commonly used but is therefore also the most congested. It is also the band used by cell phones with 802.11 capabilities for accessing the Internet. We have many experiences where Giraffs connected to routers operating in the 2.4 band experience network problems with throughput and latency, especially in public forums such as industry conferences where other exhibits are also using the 2.4 band (or where many cell phones are in use).
- Firewall problems are rare in home deployments because most home routers do not configure any firewall restrictions such as blocking ports, blocking video traffic, etc. However, in testing at facilities like care organization central offices, universities and other technical organizations we have often encountered firewall problems.

3.1.2 Implemented Solutions

We want to emphasize, that any Internet connection technology can suffer from instabilities and overloads. While we are working on making Giraff capable to handle network instabilities, we recommend using wireless routers with load balancing functionality which are now available on the market. Such devices can same several possibilities to access the Internet (like broadband and 3G) simultaneously and can automatically balance the load between them to provide stable access.

Third-party web sites such as www.speedtest.net are available to test latency and throughput between sites anywhere in the world. Anecdotal tests suggest that the Internet "backbone" (the network not including local access) within the EU is generally adequate for the Giraff application, and in fact seems adequate even on a global basis. Most quality issues can be traced to shortcomings in local access. It is also important to note that if the Pilot computer CPU is overloaded or inadequate for the Giraff application, the Pilot visitor can experience the same symptoms as are seen in the case of network problems. Based on these experiences we have developed several tools for users to identify, test and resolve quality problems, and isolate them to network or hardware issues:

- The operational guides provided to advanced users and technical support personnel now describe these troubleshooting processes in detail (although are probably too advanced for novice users).
- We have added diagnostic tools to the Pilot application that allows users to measure network performance.
- We have added the ability to run the audio/video codec software (provided by a thirdparty, VSee) separately to help isolate network vs. other problems such as firewalls
- We have integrated P2P operation (where an Internet connection is not required) into these procedures, as it is a highly effective way of isolating Internet network vs. other problems (see discussion below on wireless networking).

We have also completed preliminary testing 3G and 4G access services. These have the advantage that no installation is required in the home because they access the network in the same way a cell phone does. However, 3G testing so far indicates that it is not generally adequate for the Giraff application, and that in the best case it might be a solution for specific homes where the reception is very good.

The Giraff is currently configured to join only wireless networks with specific names and passwords. If Giraff administrators/technical personnel want to name a router something different they must change the permanent memory of the wireless utility. Otherwise, the prescribed router configuration for the Giraff follows standard Windows guidelines, which are documented in the operational guides. Of course, Pilot visitors who use wireless networks must ensure that their devices can connect to those routers, and this is outside the control of the Giraff infrastructure.

The Giraff also operates in the 5 GHz band and we have never seen a wireless network problem in that band. Therefore we now recommend to users to deploy a 5 GHz wireless router for the Giraff if possible. Previously, the Giraff required a physical cable change to move to the 5 GHz spectrum, but based on user experience we modified the design to allow for seamless transition between the 2.4 and 5 GHz bands. In most cases (especially at 5 GHz) the auto-channel selection of the wireless utility provides good wireless performance. Occasionally there is congestion that requires the Giraff to select a specific frequency, and we have updated the user documentation with instructions on how to do this, including how to access a free third-party application to monitor wireless signals across the available channels.

The Giraff audio/video connection has enough intelligence to detect if a firewall is blocking a direct connection and attempt a different type such as HTTP tunneling. The advantage of this capability is flexibility but the quality of the connection may be lower in this case. Indeed, a firewall problem can “disguise” itself as a network quality problem and we have experienced this many times. Therefore we added the capability in the Pilot application to show what type of

connection has been established, and included this check in the troubleshooting guidelines to help determine if there is a firewall problem.

We have also included an entire separate document on firewalls, including detailed instructions for IT personnel on how to unblock ports or IP addresses. We have also made available a separate document from the codec provider, VSee with detailed information on how the application establishes connections under various firewall scenarios. This documentation is available in D3.2.

3.1.3 Case from a testsite

To illustrate a case where internet robustness is an issue, we refer to a testsite in Sweden where the Giraff was installed at a “trygghetsboende”. This living facility is a group living facility that contains a number of individual small flats (one room and kitchenette) and a number of common services (common areas, restaurant and staff). It is considered to be a partially supported living facility. These facilities can be quite large and in this particular facility, the challenge was to enable a robust communication across the entire facility. What makes this challenge more difficult is that the Giraff moves. This means that as the Giraff moves in the corridors it was necessary to be able for it to switch between routers or access points. To illustrate the following text shows the issue of so called “gateway switching”

Our attempts to get Swedish test site 2 up and running we are having requests from the owner of the building that we need to extend the range of the Giraff coming in on March 8th during us visiting the building with the Giraff.

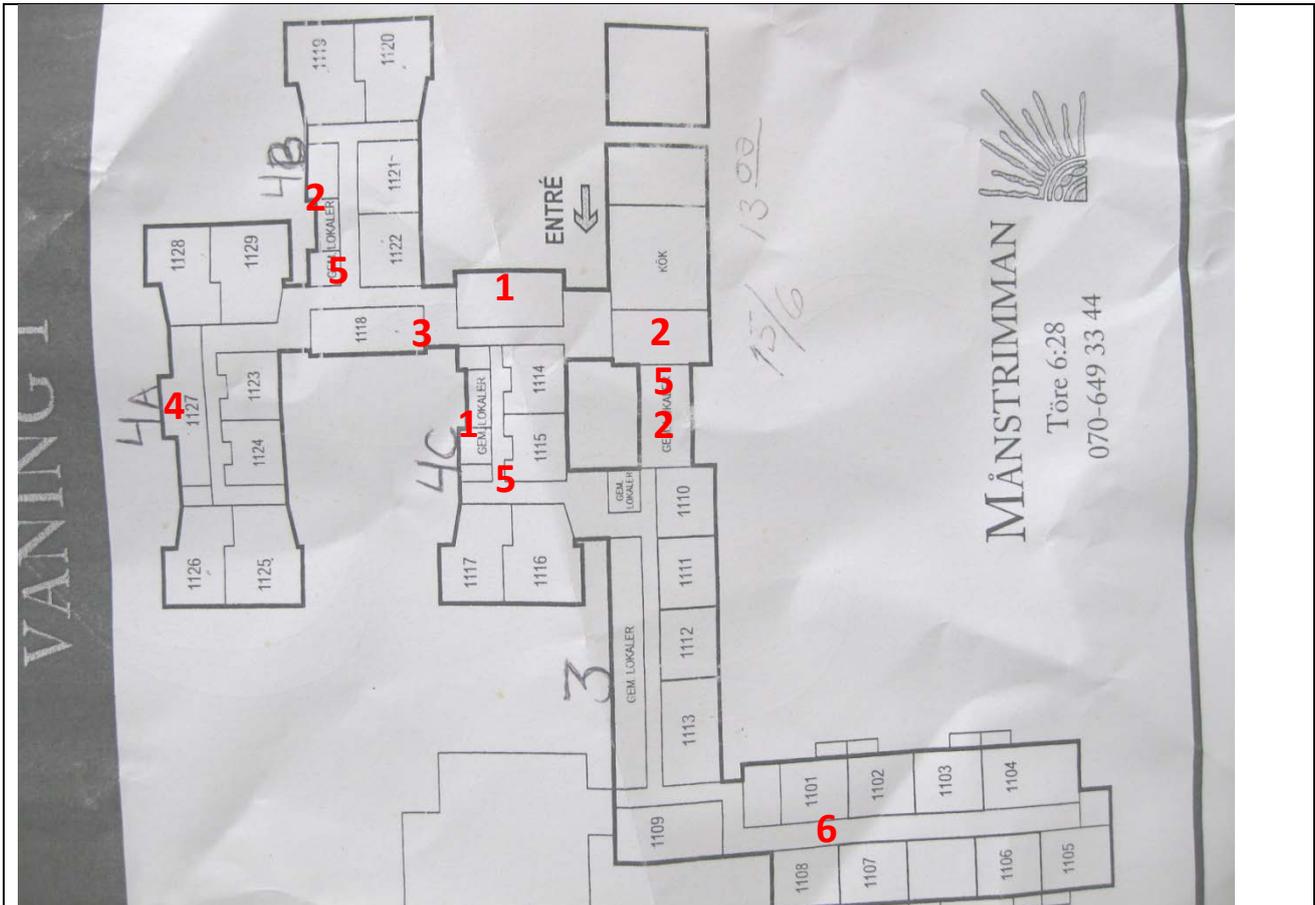


Figure 2 - 1. Position of the Giraff router which is a fiberline. 2. Common areas where people gather for informal and formal meetings. 3.. Current docking station position. 4. Location of apartment in which the person seems willing to use the Giraff for contacts with daughter. 5. Approximate positions where connection dies. 6. Several floors in this part of the building.

While talking to the owner of the building he wants to show us where he wants to use the Giraff. In particular he has called for a meeting in the “bottom area” in the rightmost common area (green). This is a restaurant so it can fit a lot of people. He wants to use the Giraff to have more frequent meetings with the residents of the building. We attempt driving to the location from two directions but the connection dies at the red arrows.

There are also many other common areas in the building. The following picture is showing the typical layout of them and is the topmost common area in the picture. We think these could be good spots to use the Giraff and to make it available. Here, in this particular common area, the owners of the building wanted to use the Giraff when we were up to inform municipalities and such about the ExCITE project.



And below is the diary by one of the ExCITE researchers that further details the problem, trying to replicate the issue in a lab environment

“Report from testing with repeaters

We have bought two repeaters (Netgear WN3000RP) which have been configured to inherit the same settings as a BIKT1 router of Trendnet brand. These have been tested at Karlslund which is the temporary location of the Swedish test site 3. At Karlslund, the layout is a bit similar to the one at test site 2 (with long corridors).

We initially tested the repeaters at Ängen but did not have much success. The Giraff could reach anyhow between the apartments to which we have access and when trying to carry it up the stairs the elevator killed the signal of the repeater. We then decided to test the Giraff at Karlslund, blueprint follows.

.....

I began testing the Giraff with repeaters on March 27th. Butthe Giraff stopped responding to calls or docking, this is likely a bug in the software and is investigated by Giraff now). After an upgrade to the latest software (bug fix from the first 1.3 version) the Giraff has been turned on since March 28th without restart when I begin my trials on April 3rd.

*I plugged in the repeaters on the spots in the blueprint. I connected to the Giraff and drove and drove to **Spot a**. Here the connection died and I lifted the Giraff back in to range. I connected again to the Giraff and drove out of range (about to **Spot a**). I then lifted back the Giraff into range and everything looked normal (on both user ends, the Giraff said it was within network range and on the client side the Giraff became available!). However, this was not the case, although I called the Giraff, the Giraff itself did not ring. After a restart of the Giraff, everything worked as normal again from the same spot!*

*I now decided to test the range again and assumed it would be possible to drive to Spot a. Surprisingly I could now drive to **Spot b**! I drove there and back to outside the room of the gateway 2-3 times and the connection lasted. However I experience a loss in visible connection with the Giraff occasionally which I believe is when the Giraff jumps between the different repeaters (and Gateway), what is a bit bad here is that the Giraff itself kept moving forward for like a meter several times without me seeing this move on the screen before I had already moved. The losses usually happened between the repeaters and the Spot a.*

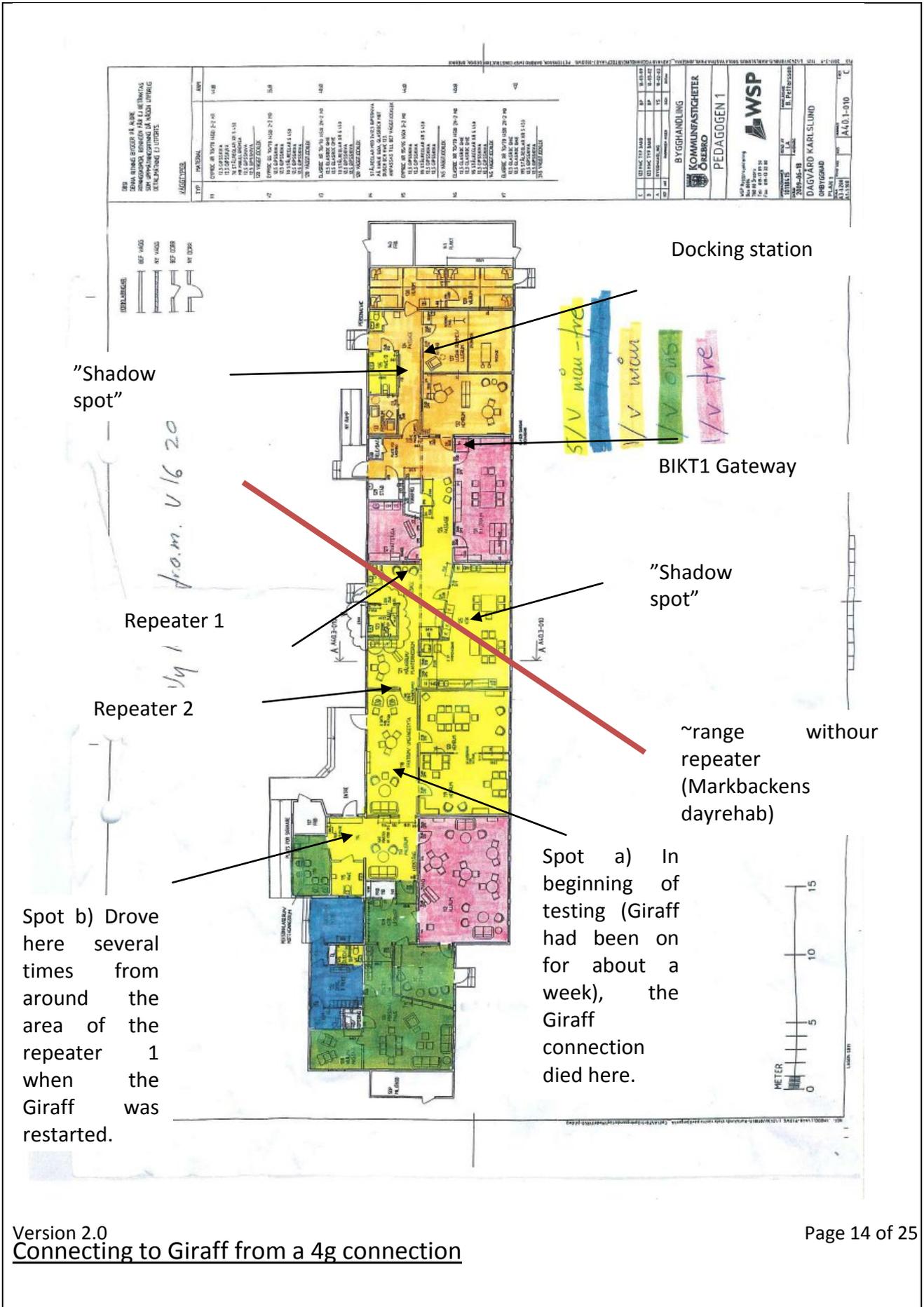
After some driving back and forth I drove back in to the middle of repeater 1 and the gateway and kept the line busy. I now went to

fetch my repeaters from the wall sockets. The Giraff client lost the connection but when looking in the client the Giraff kept saying it was busy for like one minute of time. So, obviously it had been connected to one of the repeaters when I disconnected it and now found the gateway itself again.

*I now connected again to the Giraff and drove away towards **Spot a**. I now could not reach the point, I now moved the Giraff manually in to where I knew I was in range of the gateway and tried connecting to it several times but the Giraff never called. After a restart it was available again. I connected via emergency call and drove it back to its docking station.*

The repeaters are indeed extending the range but it needs more testing! This, we in Orebro hope can be done by UMA or Giraff (or Ratio Consulta). It also needs to be tested with even more repeaters before we would dare sending them to our testsites

I decided to try connecting to Ängen with a wifi connection between my working laptop and my home 4g router which I knew had a very good connection speed (measured 29mbit down 10mbit up at the time) and drove around at Ängen for many minutes without trouble.....



4 Call answer security

The problem: There are two types of visits caregivers can perform. First is a usual visit, when local user has to answer in order to allow the visit to start. End users need some way to accept or reject calls. In D3.1 work has been performed to add physical buttons to the Giraff platform. The issue here is beyond the physical call security but also deals with how to regulate permissions and user access levels. Below is a screen shot from the client (sometimes called pilot) which allows a user to access a Giraff either by making a call which needs to be accepted "Connect" or by making an emergency call which grants user access to the remote location.

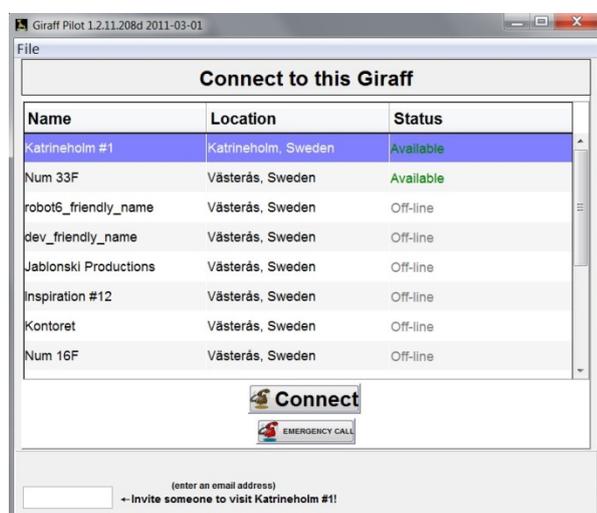
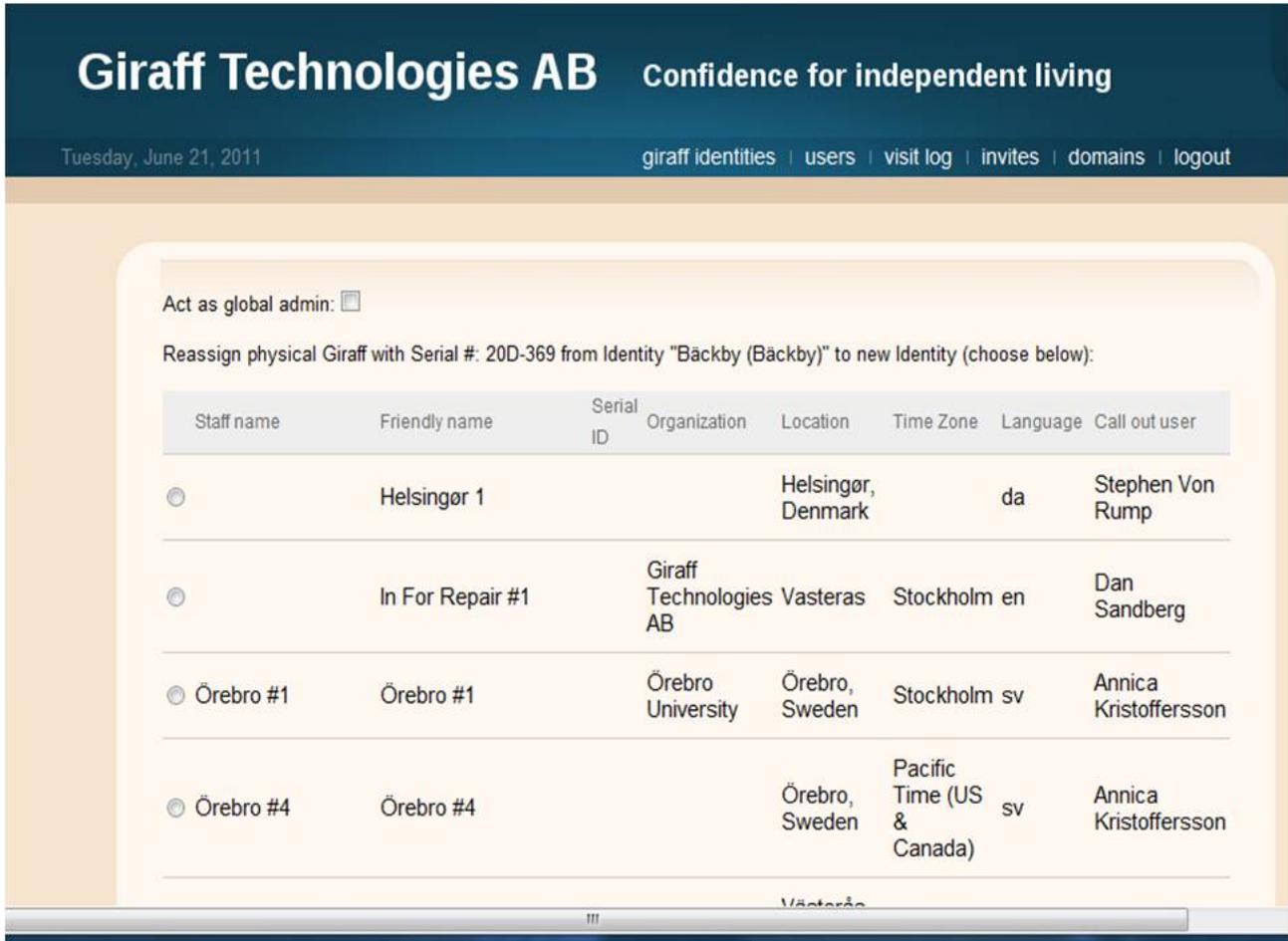


Figure 3: "knock" and "enter with key" buttons in Pilot user interface

The solution: The Sentry server was introduced to manage, among others, what users are permitted to make a normal visit to a certain elderly home (or, actually, Giraff unit) and who of them are allowed to make emergency visits. Current version of Sentry server allows care organizations to manage their Giraff users, create, delete, and modify user accounts and assign different levels of access to different users. The technical details of how this is done are found in D3.2 (summary) and partly in Appendix 1.



In the above screen shot one can manage Giraff, under “staff name”. From the start of ExCITE to M36, sentry has undergone two major revisions.

5 Call initiation from the unit

It was found in a user study, that the ability for local users to initiate a visit is required. For example, if elderly needs to talk to caregiver the call can be started from the Giraff side. Current version of Giraff platform allows doing so by using one of the buttons on the Giraff unit or on a remote control. Buttons on the Giraff robot are located on the top of the body (see Figure 4).



Figure 4: Call control buttons on the top of the body of the Giraff unit.

User need to press green button to start the call. Or, alternatively, the remote control (see Figure 5) can be used. Similarly to the button on the Giraff robot, green button is used to start the call.



Figure 5: Giraff Remote Control

Solution: It is necessary that at the setup phase, the proper remote user for “callouts¹” is specified. In the current version of Sentry server it is impossible to finalize the setup procedure if the callout user is missing. Thus it is assured that elderly can always reach caregivers.

Additionally to that, current version of Sentry allows to send email or SMS notifications when a callout user is not responding. Email address and a phone number are specified at the installation phase. More information on how this is done is available in Appendix 1.

6 Audio and video improvements

6.1 The problems

The quality of audio and video on Giraff platform is comparable to other videoconferencing systems on the market. But it was found that while being acceptable for normal videoconferencing, these parameters are not enough for mobile robotic telepresence system.

For example, most videoconferencing programs only support monophonic sound with a very limited bandwidth. Giraff also offers monophonic sound with a bandwidth adjusted for human voice, which works well for human-human communication per se. But it was reported that users would like to have enhanced audio quality to be able to get full aural experience from remote environment. Moreover, multichannel sound from Giraff to Pilot will allow pilots to better feel immersion and improve spatial perception. It will also allow pilot users to localize speaker in the remote environment based on the direction of sound.

Currently Giraff system is designed in the way similar to conventional videoconferencing systems. The microphone and speaker on Giraff are placed to provide good performance on human voice frequencies, but fail to give good lower and higher frequency performance. Also, the stereo sound cannot be used.

Similar situation occurs with performance of the video system. In general, the resolution of 320x240px is acceptable for videoconferencing. Some systems offer resolution 640x480, so does Giraff. But when it comes to mobile robotic telepresence, then the resolution is not the only parameter, which affects user experience. With higher resolution, other factors become visible. For example, lack of dynamic range does not allow using Giraff system in the dark – pilot users cannot see details despite having high resolution. Example of bad image in low light conditions is shown in Figure 6.

¹ According to internal terminology in ExCITE project, “callout” is an event, when elderly makes a call to caregiver through Giraff. Thus, the visit is initiated at the Giraff side, not on a Pilot side.



Figure 6: Example of the image from Giraff robot in low light

Another problem, which becomes evident when digital image resolution is increased is bad performance of optical system. Current Giraff lens is a multielement lens with plastic made elements. This lens is sufficient for lower resolution, but cannot resolve higher resolution sensor. It was requested by users to introduce zoom functionality in order to allow pilot to see small imes like pillboxes. But this cannot be done due to the aforementioned optical limitations of the current system.

6.2 The Solution

The work on fixing issues related to audio and video quality are currently ongoing and will be reported in M42 of this deliverable.

7 Investigation of possibility of adaptation of pilot to different platforms

Pilot application is developed using Java programming language and a framework. Current version of Pilot takes advantage of Java version 1.7. This makes the Pilot application true cross platform and actually means that in theory Pilot application can be used on any device capable of running Java 1.7 and having sufficient computation power. Moreover, the technologies used in the user interface, such as responsive design and Nimbus look and feel allow Pilot application look identical on any platform, from desktop computers to tablets.

At the same time, Pilot application uses a third-party library for audio/video streaming which is currently only available for Microsoft Windows platform. This is a main obstacle, which prevents Pilot application from being used on different operation systems and devices. Currently, the Pilot application can be used on x86 or x64 versions of Windows XP, Windows Vista, Windows 7, and Windows 8. According to the OS usage statistics, available from the W3 consortium, (see, Figure 7) Pilot covers 82.6% of possible platforms. Also, it is now possible to use Pilot application in MacOS-X using Parallels.

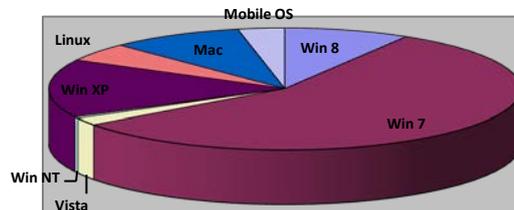


Figure 7: OS usage statistics for June 2013

At the same time, ExCITE project consortium is also interested in making Pilot application available for other platforms. Giraff initiated the internal development process on switching audio/video streaming technology to make Pilot application cross-platform. Currently, this work is investigating the potential of using modern web-based technologies such as WebRTC. At the same time, it is important to mention that the questions of information security and privacy cannot be compromised to achieve cross-platformity and much effort is needed to ensure proper level of technical invulnerability of the link between Giraff and Pilot.

8 Conclusions

This document has outlined the work done on communication. Significant study has been put on internet and communication quality. ExCITE has found that while new technologies are emerging the best way to address shortcomings is to provide good installation instruction for users and also

to confine the about of choice users have e.g. using a specific router provided by the company. Regarding the other task on call answer and call initiation. These tasks are now fully solved. Starting first from the technical recommendation elderly want to have more control over the unit and mapping this feedback into technical changes of adding a callout user and Both Sections 4 and 5 required quite some technical effort especially to establish the functionalities of the Sentry server. Audio and Video improvement will require quite some hardware changes and are currently in progress. The solutions will be presented in M42 of this deliverable.

9 Appendix 1

Excerpt from the Sentry User Guide that explains the concept of Giraff Personalities and enables each Giraff to assign a callout user.

9.1 Giraff Personalities

On this page you can create, edit or reassign a Giraff personality, and add or change visitor permissions for that personality. Click on the “giraff personalities” tab on top of the Sentry web page to see the personalities for your groups. If you are the administrator for more than one group you can choose the group from a drop box (as shown below).

Group: LifePlus Carecenter ▾

Giraff Personalities

Select an personality and then click an action

Staff name	Friendly name	Serial ID	Organization	Location
<input type="radio"/> Team Gamma	Giraff 1	436-998	LifePlus	Stockholm

9.1.1 Creating a new Giraff personality

A new personality can be created at the same time as it is being assigned to a physical Giraff. To accomplish this, select “Reassign personality” and then “Make new personality” - see below for more information on creating a new personality.

9.1.2 Editing a Giraff personality

Important: Administrators should not use this feature to change a Giraff personality to a new one, but rather only to correct or edit information for an existing personality. If the editing feature is used to create a new personality, Sentry will still think of the original and newly created personality as the same, and therefore it will show all visits to both personalities in the same visit log. For example, if the edit feature is used to change the personality John Doe Home to Mary

Smith Home, there would be no John Doe Home visit log and all visits to both homes would be shown in the Mary Smith Home log. To create a new personality the “Make a new personality” feature should be used.

To edit a personality, select a personality by clicking on the button in front of the name, and click on “Edit Personality” button. Enter/edit the entries as shown below, and then press “Submit” when completed.

Staff name

Friendly name

Serial

Organization

Location

Time zone

Notes

Staff name: A name for the caregiver staff to identify the Giraff.

Friendly name: The common name for the Giraff that is shown on the initial Pilot screen that lists authorized Giraffs, and also on the Giraff screen when the Giraff is running

Serial: This is the serial number of the physical Giraff to which the personality is assigned. This assignment cannot be changed by an administrator, but can be important information when troubleshooting a problem with Giraff personnel.

Organisation: The organization (e.g. municipality or caregiver) to which the Giraff personality belongs.

Location: The current location of the Giraff.

Time zone: The time zone where the Giraff is placed (important to accurately report visits in the visit log).

Notes: Any notes you want to add about the personality, visitors, etc.

Names: A list of names of people who reside at the home where the personality is being used.

Language: This sets the language that this Giraff personality will display messages in.

Callout visitor: Calls made from the Giraff will contact this person if they are logged into their Pilot at the time.

Send notification when Giraff not answered: When

Names

Language

English ▾

Callout Visitor

John Anderson ▾

Send notification when Giraff not answered

Email

Phone

Send notification when Giraff goes offline

Email

Phone

Submit

Go Back

a callout is made from a Giraff, and there is no answer or the person is not logged in, an SMS and/or email will be sent to the phone number and/or email address entered here. Be careful with the phone number format; since Giraff is an international service, the number should be in international form, with country code (but without the + sign). For example, a Swedish cellphone number 070 123456 would be entered as 4670123456. Notice that there is no leading zero after the Swedish country code (46). Most other countries have a similar format where you need to drop the leading 0, but the right format depends upon the numbering system in each country. The rule of thumb is to enter the same number as you would call if you would call the phone from abroad.

Send notification when Giraff goes offline: When a Giraff goes offline for whatever reason, an alert will be sent to the number/address entered here. For phone number format, see above.

9.2 Changing visitor permissions

To change visitor permissions, select a Giraff personality by clicking on the button in front of the name, and then click on "Visitor Permissions" to open a list of all visitors that have permissions to that Giraff.

To add or remove permissions check / uncheck the boxes under a name as shown below:

Giraff personality friendly name: Giraff 1
John Anderson

call emergency call approve

<Choose Visitor>▼

call emergency call approve

The permissions are defined as follows:

Call: This allows the visitor to call the Giraff, but the call must be answered by the resident.

Emergency Call: This allows the visitor to make a visit without the resident answering the call. Obviously, this should be allowed only when the visitor is a highly trusted person who knows when an emergency call is appropriate.

Approve: This setting is obsolete and will be removed in *the* future. It can be ignored for now.

To add a visitor to the list click <Choose visitor> and select a visitor from the list, then assign the permissions by checking the appropriate boxes.

After changes press “Submit.”

9.3 Reassigning a Giraff

This feature reassigns the physical Giraff associated with the personality you select to a different personality, or allows you to create a new personality. To assign a Giraff to a different personality, select a current personality from the list by clicking on the button in front of the name, and then click on the “Reassign personality” button.

Choose the new personality that you want to assign this Giraff to and press “Submit”. You will note that Sentry will identify the physical Giraff being reassigned, and the serial number of that Giraff will appear in the newly assigned personality.

It is also possible to create a new personality instead of selecting an existing one. To do this, select “Make a new personality” and fill in the fields as described in “Editing a Giraff personality” above.