

Code	Identity	Expected behaviour	[OK/NOK]
SU.1	Setup	The application must be successfully set up on a device that runs Android 2.2 or higher.	
UI.1	Status Reporting	The program must update the status of the user interface every two seconds.	
UI.2	GPS Prompt	The collector must prompt the user to activate GPS if it is not enabled on the device.	
UI.3	Recording Control	Clicking „Start Recording“ must activate the recording. Clicking „Stop Recording“ must deactivate the recording.	
UI.4	Recording State	The state of recording must be indicated by a green bar in the respective button and a progress indicator next to the button.	
UI.5	Transfer Control	Clicking „Transfer Samples“ must transfer any recorded samples.	
UI.6	Transfer State	The state of the transfer must be indicated by an animated progress bar below the „Transfer Samples“ button.	
UI.7	Streaming Control	Clicking „Start Streaming“ must activate the streaming. Clicking „Stop Streaming“ must deactivate the streaming.	
UI.8	Streaming State	The state of streaming must be indicated by a green bar in the respective button.	
UI.9	HAR Control	Clicking „Start HAR“ must activate the human activity recognition. Clicking „Stop HAR“ must deactivate human activity recognition.	
UI.10	HAR State	The state of the human activity recognition must be indicated by a green bar in the respective button.	
UI.11	Sample deletion	When clicking „Delete All Samples“, all samples must be deleted.	
UI.12	HAR result indication	When the human activity recognition is activated, the currently recognized activity must be shown in the user interface below the ID text-box.	
UI.13	Annotation notification	When clicking the send button next to the annotation text-box, a notification must pop up with the text in the annotation text-box.	
UI.14	Queue fullness	When recording, streaming or with activated human activity recognition, the queue size of the queue must change permanently.	
UI.15	Persistence	When recording, the sample count must increase. When transferring, the sample count must be set to zero. The size of the persisted ZIP-file must increase.	
UI.16	User Identity	When clicking set next to the ID text-box, the user ID in the information section below must change to the text in the ID text-box.	
UI.17	Program Uniqueness	The information area below the activity indicator may not change the order of listed items.	

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UI.18	Streaming Target	When clicking menu, an item Settings must show. On clicking this item, a second screen must show up. When a value in the streaming address is entered, this address must be used as the streaming location.	
SC.1	GPS Recording	The collector must record a GPS sample every five seconds.	
SC.2	Accelerometer	The accelerometer sensor of the device must be recorded at 40 Hz.	
SC.3	Linear Acceleration Sensor	The linear acceleration sensor of the device must be recorded at 40 Hz.	
SC.4	Gravity Sensor	The gravity sensor of the device must be recorded at 40 Hz.	
SC.5	WiFi Environment	Every thirty seconds, the currently available WiFi access points must be logged with their respective signal strengths.	
SC.6	GSM Environment	Every twenty seconds the network cells visible to the phone must be logged.	
SC.7	Google Activity	If the phone supports the „Google Play Services“, activities recognized by these services must be recorded.	
SC.8	Human Activity Recognition	The detected human activity must be recorded.	
SC.9	Annotation	A sent annotation must be recorded.	
SC.10	Identity logging	When the Id is changed, a corresponding annotation must be written.	
SC.11	Trip division	On clicking start-recording, an annotation with the text „Start Recording“ must be logged, on clicking stop-recording an annotation with the text „Stop recording“ must be logged.	
UL.1	Upload	Upon completion of the sample transfer, the server transferred to must have the sample file in the form that the Id prepends the approximate recording time.	
NC.1	Streaming	When a streaming address of a server is entered, which is visible to the device and running a ZMQ server on the appropriate port with the mode SUB, this server must receive the recorded samples when streaming is activated.	
NC.2	Live Activity Recognition	When the streaming address points to a live activity recognition server and streaming and human activity recognition is activated, the front end of the server must show the same activity as the device. A small delay may be accepted due to internet latency.	