

EXAMPLE: D2 for WakeKill project

Project Purpose and Scope

The systems exploits a set of sensors, in your smartphone or in your house, and a set of actuators, to deliver a wake-up service to the user.

The wake up time is defined by checking the user calendar, the set-times for the phone alarm, the external weather. The the wake up method is a combination of the phone ringing, the light going on, ~~the curtains being opened~~, the music playing. If the user is not at home, then only the phone is used. If the user is not alone, then music and curtains must not be used.

The user can set the preferences on the wake-up methods, and the system may learn from the user habits.

Glossary

- Location: “at home”, or “away”
- Stimuli: the set of audio/light/etc signals that are supposed to wake up the Target User
- Wake-up time: the time of the day at which the system will try to wake up the Target User (using the available and suitable methods)

Actors

- User, or Targer User: the main user of the system, that will be woken up
- Family: other people, living with the Target User, but are not to be woken up. But the might insert information into the system to change the Targer User’s schedule.

Functional Requirements

Area Code	Functional Area
SETUP	Installation, set-up, first configuration
CONFIG	Settings and preferences (may be changed any time by the Target User)
SET-TIME	Set-up for the next morning’s wake-up time
WAKEUP	Action of the systems to wake the Target User up
...	...

FR	SET-TIME.1
Title	Set the wake-up time for tomorrow
Description	The user may set the wake-up time for the next day. This time will be valid only once, and will be added to the currently planned wake-up times. If the current hour is between 04:00 and 23:59, then the next day’s wake-up time is set. If the current hour is between 00:00 and 03:59, then the current day’s wake-up time is set. If another wake-up time, for the same day, was already defined, it will be suspended only for that day.
Priority	1

FR	SET-TIME.2
Title	Set the wake-up time for every day of the week
Description	The User may set the regular wake-up time. This time will be valid everyday. The User has the option of setting more than one daily wake-up times. The

	user has the option of setting the set of weekdays on which the wake-up time is active (e.g., Mon-Fri).
Priority	1

FR	SET-TIME.3
Title	Suppress wake-up for tomorrow
Description	The Target User, on his mobile phone, selects a function to suppress any wake-up call in the next day (if it's before 23:59) or in the current day (if it's from 0:00 to 03:59).
Priority	2

FR	SET-TIME.4
Title	Family asks to override tomorrow's time
Description	A Family member inserts a wake-up time for the next day, that will be taken into account for the Target User (by taking the <i>minimum</i> between the normal time and the override request).
Priority	2

FR	CONFIG.1
Title	Set music
Description	The user may choose whether he wants some music in his wake-up call. Note: the music will be played by the smartphone or, if some audio device has been set in the SETUP area, then it will use the audio device, preferably.
Priority	1

FR	CONFIG.2
Title	Set music preferences
Description	The user may choose the type of music he prefers, by listing a set of keywords.
Priority	3

FR	CONFIG.3
Title	Set light
Description	The user may choose whether he wants light control in his wake-up call. Note: the involved lights must be defined in the SETUP area.
Priority	1

FR	CONFIG.4
Title	Set ringtone
Description	The user may choose whether he wants the phone ringing in his wake-up call. Unless overridden, the default ringtone is used.
Priority	1

FR	CONFIG.5
Title	Set ringtone preferences
Description	The user may choose which ringtone will be used.
Priority	2

FR	...
Title	...
Description	...
Priority	...

Non Functional Requirements

NFR	1
Title	Supported smartphones
Description	The user smartphone must have an Android operating system, version 5 or better.
Area	Portability

NFR	2
Title	Powered Smartphone
Description	The user smartphone must be switched on for the system to work. If the phone is off, then the system will not issue any wake-up call.
Area	Reliability

NFR	3
Title	Light control
Description	In the user home, some sort of controllable lights must be available. The supported lights will be the Philips Hue lamps.
Area	Interoperability

NFR	4
Title	Language
Description	The language of the user interface will be English.
Area	Usability

NFR	...
Title	...
Description	...
Area	...