## *Smart Device for Smart Life*

"meeting new people around you by matching your interests in that place at that moment"!
Smart Device(s) for Smart Life (SDSL) supports/replaces normal social interaction (personal, professional and more) by notifying portable device owners of nearby users, whose profiles are interesting for him.
It facilitates human relations in an automatic, asynchronous and time/geo localized way with profile matching support and by the interaction with smart objects (pubs, events, meeting points, public spaces etc.) where people can attach their profiles and their requests.
It is based on simple social mechanisms (derived from social network to real world and real life):

- asynchronous association of profiles (based on real environment in a geo-localized, automatic and non intrusive way);
- Generalized profile association based on profile description and requisites.
- Dynamic profile association based on the exact combination of time, location and requirements ("that person, at that place at that moment").

Smart Device(s) for smart life leverage capabilities today available from portable devices whose mobile phone (today quite affordable) represent the main widespread example.

The idea is mainly targeted to social and inclusion domain. Additional Scenarios can however be considered.

- Meeting new people around you by matching your interest at that place at that moment could happens also for older citizens that still want to interact with other (with similar interest and activity in their free time) in parks, institutions etc.
- For important places frequented by a large number of people (cities, museums, exhibitions) to exchange messages, ideas and common interests in a social network style on specific themes relevant for that place.

## *1. Minimum Requirements for a successful trial*

Smart Device(s) for Smart Life (hereafter SDSL) brings together concepts and mechanisms of web 2.0, geo-localization and matchmaking of profiles (space-time-generic-profile referenced) leveraging capabilities nowadays available from portable devices.
SDSL foresees a strong opportunity in a very young market of mobile applications and web based solutions where social interaction can become a service as simple as the exchange of the more common SMS (by supporting/replacing normal interaction notifying portable device owners of nearby users whose profile are interesting for him).
In order for this solution to reach a wide impact both for a successful trial in real environment but also in a future market adoption it has to be translated in a very specific service (addressing specific needs, targeting specific user categories), in a user-friendly product (easily accessible and understood intuitively), in an appealing application (with user interface, screen, options and graphics attractively for the user) and finally a appropriate model to reach a suitable critical mass and community level adoption (identifying the actors that can be involved in its advertisement, distribution, customization etc.).

## *2. Number and quality of test users to involve*

The solution based on SDSL has to be tested by a specific set of users: tests are needed both in large environments (to assess the quality and the quantity of improved relations with "social matchmaking support") and in close spaces where the concentration of users in specific spaces is useful to stress the system handling multiple profiles at the same time. Secondly real environment testing (open spaces, public spaces, transports) is welcome and encouraged.
Finally the availability of users with skills and experience on mobile applications over the normal user level (in order to be able to report bugs or abnormal behaviour of the application with valuable feedback) is highly welcome.

### *3. Number of technical devices needed for testing*

The SDSL application prototype is currently available for Android 2.1. The choice of Android OS to develop the first application was based on practical aspects: primarily the accessibility of devices (today affordable at a price lower than 100 euros) then the possibility to run real tests with real devices during the development (the application can be installed configuring the device simply copying the .apk file transferred by email, dropbox or shared on external memory without passing from official store) and finally the experience of SDSL team in Java language.
In a successive step (characterized by a refinement of the app architecture as described later in this document and dedicated test with multiple devices by real users) a translation to the iOS platform will be performed.
A version for BlackBerry is also under evaluation within the six coming months of development.
The reality check will require one device per user with constant Internet access (Wifi, GPRS). The availability of a laptop or personal computer will facilitate the subscription and account creation in the beginning phase.
The availability of a local server (with php and mysql) having performances above the average solutions available for normal hosting is finally a plus.
SDSL server is currently hosted on Hostrocket US provider.

### *04 The capability of the current prototype of SDSL*

There is already a prototype version of the SDSL application designed to facilitate people profile interaction in conferences and meetings.
The development of ad-hoc solution aimed at facilitating and supporting interaction of people in social life (Inclusion domain) in public space is the target expected for this reality check. This can be done in parallel with the development of the original prototype case by concentrating on implementing the abstraction of the solution described in paragraph 12 (SDSL framework).

### *05 The role of this team in conducting the reality check trial*

The SDSL team can cover all the coding tasks (both at mobile and server side) including what is necessary to customize and configure the solution to be applicable in different domains.
This team is able also to coordinate additional or external development resources and perform training on SDSL concepts and technical solutions to improve the development of the prototype and speed up the whole process.
The first goal in the successive months is to strengthen the solution and allow that abstraction that will guarantee customization and adoption in different contexts easily.
We rely on Living Lab test and support to give us ideas on how to further improve the UI design, user experience, and business model.

The role of the Living Lab can be useful also in identifying the actors and stimulating the relevant network connections to facilitate the successive phase of make agreement with interested stakeholders for the adoption of the developed solution.

### *06 Meetings and communications*

SDSL is actually based in Italy. For the conduction of the trial test we are planning however regular meeting over skype or similar platform adopting if necessary all the available technologies for virtual conferencing (such as video, screen sharing, dropbox file synchronization etc.).
In order to follow sensible phases of the pilot set-up and execution, travels can be arranged. We hope that the chosen Living Lab could cover our travel expenses.

### *07 Mission of the Living Lab*

(1) To find out are the best solution in terms of usability, user functions and user interface design allowing the support / replacement of human interaction easily and effectively
(2) Identify main characteristics and elements users are expected to see included in the description of their profiles and requirements for profiles functions
(3) Identify relevant functions to promote such application to be most effectively possible to address the specific need of supporting/replacing social interaction and people inclusion
(4) Identify relevant actors and stakeholders to consequently distributed and make the application available to the widest possible set of customers and largest user's base

### *08 Testing scenario*

Goal: encourage optimal user's behaviours to leverage and utilize the SDSL implementation in social and inclusion domains.
Testing: testing can be carried out both in single places where all the users are equipped with running version of SDSL application and/or in districts/cities where only a specific number of users are equipped with mobile devices and SDSL solution.
This second scenario is also interesting to involve not included users in the original experiment and register their interest in installing the application. The large area scenario is also important to investigate the coincidence of Matchmaking based on the proximity and understand which are the best options in term of minimum requirements for profiles, GPS scanning range etc.

### *09 Participant in the testing scenarios*

Users: every user must have an android device with installed and running application and must have created is account and profile requirements (on the server) before starting the trial.

### *10 SDSL Solution test*

During the tests the SDSL team is expected also to include new functionalities based on the user's experience feedback (under evaluation) and can add different additional characteristics to describe user's profiles/requirements.

### *11 Security and privacy*

The execution of the tests will be useful also for the SDSL team to understand which are the relevant elements (concerning privacy) the users expect to be stored on mobile devices and which information make available at server side (to improve capabilities of interactions leveraging social network mechanisms).

The test will be useful to understand also the effectiveness of the modalities “notified by nearby profiles without being tracked by other users” or “only tracked without notification on interested profiles”. In addition to this the notification of a user profile discovered by another user can also be investigated.

## *12 SDSL Framework*

SDSL is based on a solution today not very exploited for mobile applications except for messaging and large social networks (where mobile devices functions are however the transposition of the ones available on the Internet).
The communication with the devices is based on a server - client model where all the devices (registered to the web-server) communicate their “id” information together with the GPS position (determining the interaction with other profiles based on the proximity -and the profile requirements- for the social interaction schema the specific matchmaking of profiles is expected to achieve).

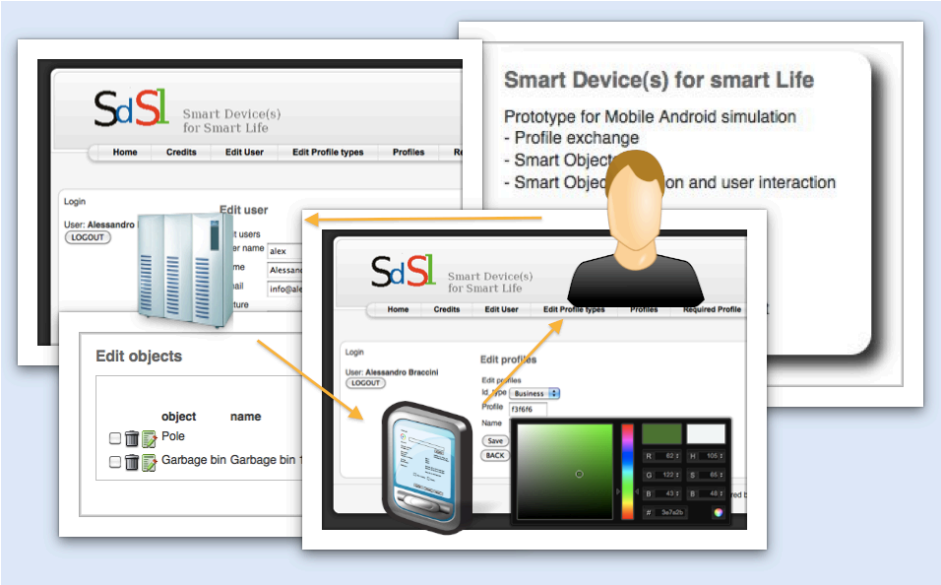


**Figure 1 - Client - Server model**

The schema reported in Figure 2 can exemplify a different description of SDSL solution. That is the "Development as a platform model" model.

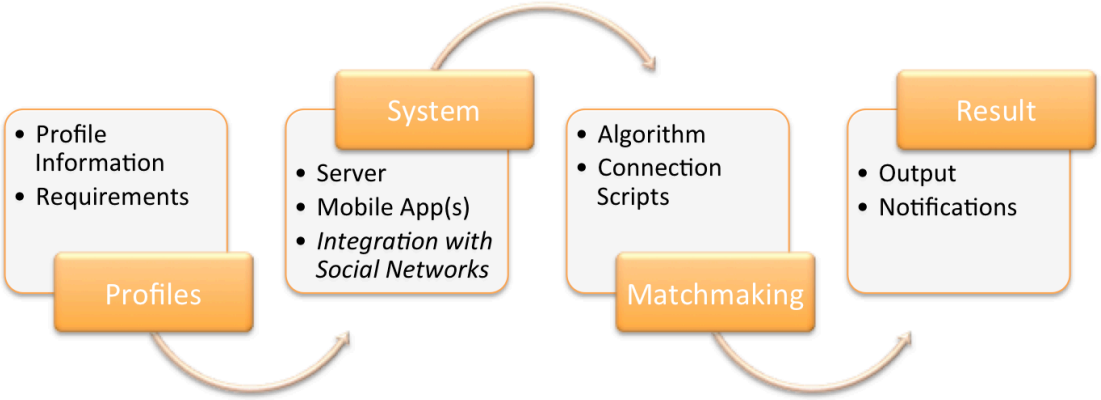


**Figure 2 - SDSL Model as a Platform**

This further model representing SDSL solution (whose achievement is on top of the coming development efforts scheduled) is able to generalize the concept to be easily adaptable to different contexts and needs (not losing at the same time the final characteristics of addressing specific domain and user needs and describe users with single access credential and information).
This conceptualization is based on the independency of the different elements composing the SDSL base solution. It will allow the easily development and the integration of first (description of profile information and profile requirements) and third (specific Matchmaking algorithms) elements to address new domains with easy customization process (extensible also by dedicated API to mesh-up with other software or web applications).