Use-case Concurrent Testing

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Abstract

The purpose of this use case is to describe the testing case in which a service provider wants to test and assess the diverging usage pattern in different regions and market, so that the developed service can be adapted to best satisfy the end user requirements of the target market.

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1 Executive summary

An SME or Industry company in the domain of ITC has developed a geographically localized information service, including the user interface on a mobile device. This service has been implemented by a service provider and an operator (which can be the same company) and is successfully deployed in a european country.

One of the stakeholders (SME or service provider or operator) wants to evaluate the potential extension of the service to new markets (new types of information and new countries), by a live experience with different user groups. The Panlab Office tools and services, and the Panlab federated testbed, are well suited to identify and recruit the necessary user groups and then to setup and execute concurrent tests at the same time period in different locations.

The results of the tests are collected and analyzed to bring out the behaviour and expectation of the final users, to define the necessary adaptation of the service characteristics to the country, and to estimate the benefit of a new deployment with techno-economical data.

2   Targeted users

In this use-case, the Panlab customer is one of the following users :

- SME or Industry company in the ITC domain, having developed a service (geographically localized information service in this example) including the user interface on a mobile device;
- Service provider offering the service through the network of an operator in a european country;
- Operator of the network supporting the service;

Users in the previous list not acting as customer are required as Panlab partners. Other Panlab partners contributing to the test are:

- Operators from different countries, with network able to support the service;
- User groups;
- Organization recruiting the necessary user groups and collecting the data and analysing the results;

3 Description

We consider an information service, where a final user gets a geographically localized information on a mobile device. The objective of the concurrent testing is to evaluate the potential extension of the service to new markets (new types of information and new countries), by a live experience with different user groups.

Many types of localized information are possible, such as:

- restaurants and hotels addresses and characteristics;
- museum and tourism informations;
- market places;
- shopping centers;
- doctors and drugstores
- …

The behaviour and expectation of the final users can vary depending on the country. One objective of the test is to identify the necessary adaptation of the service content to an envisaged new country.
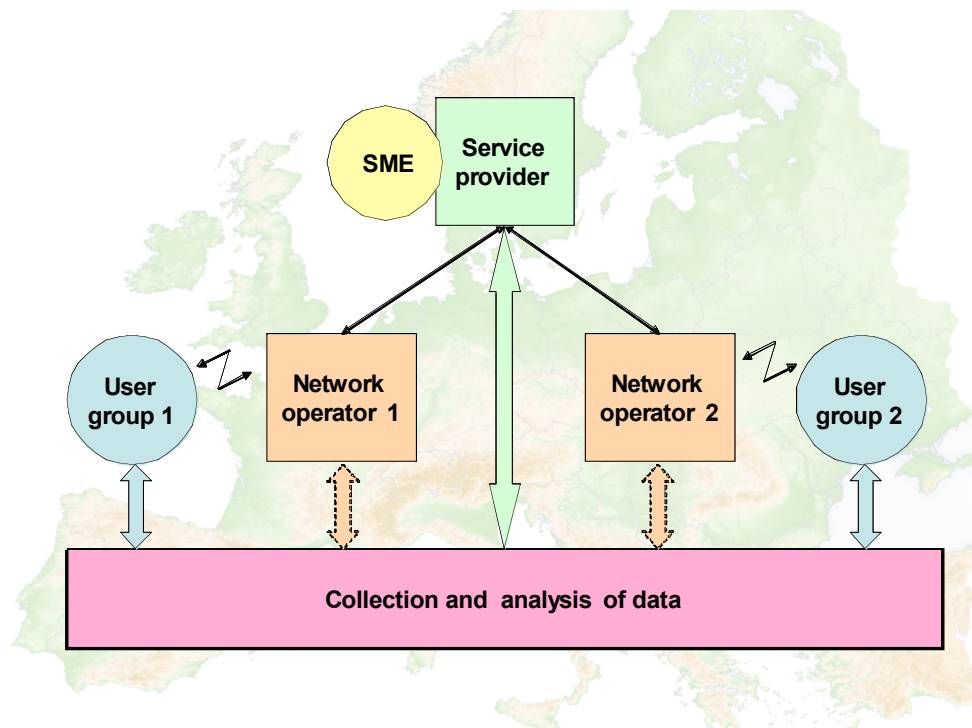

Figure 1: Concurrent testing

3.1 Interfacing with the user

The Panlab customer (SME, service provider or network operator) uses the Panlab Office services and the Teagle tool to specify the technical setup and equipment needed, in order to identify an operator in the envisaged country, having a network able to support the service.

The Panlab customer also specifies the user groups characteristics (size and profiles) and the type of required results, to identify a Panlab partner able to recruit the necessary user groups and then to collect the data and analyse the results.

This identification of partners and preparation of the concurrent testing is done through the Teagle customer interface.

When the actors of the test are all defined, they must agree on contractual aspects, such as cost, access rights and ownership of results before going further on.

3.2 Platform set up

SME or Industry company, in relation with the service provider, upgrades the data base with localized informations relating to the new country or geographical zone considered in the test. If the test also includes evaluation of new service content, the data base must be upgraded with new type of information.

The final user interface on the mobile device needs to be adapted to the language of the new country, and possibly to new service content.

The service provider and the operator of the new network introduced in the test must check that the service can be actually supported by the network (introduction of some new functionalities in the network may appear necessary).

The procedure and technical architecture for collecting the data during the test must be installed and checked.

When the necessary user groups are available, mobile devices are distributed to the final users.

3.3 Results acquisition

During the test, data are collected from the service provider (survey of access to the data base), possibly from the network operators, and from the final users (questionnaire about usage of the service).

Data are analyzed to bring out the behaviour and expectation of the final users, to define the necessary adaptation of the service characteristics to each country, and finally to estimate the benefit of a new deployment with techno-economical data.

Results are delivered to the different actors according to a pre-defined agreement, and may be uploaded on the Panlab results repository with pre-defined access rules.

3.4 Charging

Fees are charged by the Panlab Office to the Panlab customer(s) for services and tools such as VPN access, scheduling and management tools…

Charging between the other partners must be predefined by contractual agreements, in relation with access and property rights on results. On one hand the SME, service provider, network operators (and even the organization collecting and analyzing the data) are potentially interested by the results to extend their business and market, and on the other hand they are providers of resources and man-power for the test market. There is no general rule for cost sharing, and it has to be defined case by case.

4 Expected impact

4.1 Research on the Future Internet

The opinion and expectations expressed by the final group users about the service provided, and the analysis of the traffic generated by the service will contribute to revise the functionalities and architecture of the networks. Aspects such as localization accuracy, authentication, privacy… which are relevant of the test are key elements of the future networks.

4.2 The market

The analysis carried out from the data collected during concurrent testing is an input to prepare adaptation of service to new populations and to estimate the benefit of deployment in new countries. This analysis has a direct impact on the service evolution and on the growth of the market, with benefits to all partners along the value chain : SMEs, service providers, network operators, equipment manufacturers and final users.

4.3 Evolution of the PANLAB office

The success of concurrent testing will be an argument to promote the services offered by the Panlab Office and to show the feasibility of tests with user groups at a large geographical scale.

Experience on operational and technical aspects drawn from test implementation can be reused for similar tests with other kinds of services and/or in different countries, involving new partners.