

WHITE PAPER:

Productivity Improvement Processes in Localization Testing

January: 2014

Introduction

Due to inclination towards an agile way of operations, quick and instant communication has become important to meet global market requirements. To show their existence and commitment towards regional markets, every company wants to release its product on time in this global market. In order to meet product releases in other locales with respect to the core (English), localization testing processes and strategy need to be strong.

About the Topic:

This topic covers all possible scenarios that I have seen and resolved through different processes. An Effective process is a prominent factor that increases localization tester's productivity especially when we need to release a localized product within a limited time frame. Especially if one is a manual tester, he should also look at utilities that can reduce his efforts. Such a process also goes a long way in minimizing the total cost of quality.

Problem Analysis and Challenges:

Seen below are some of the typical challenges faced in a localization testing cycle:

Problem 1: Time available to test across locales is not the same as the core language (English)

As localization testing only starts after major fixes of core bugs are complete, a tester get very less time to test the product in native locales. It is really challenging to test the complete product across locales.

Problem 2: Time to ramp up a localization test team is not negligible

For localization projects, it is very important that the test engineer be aware of all localization nuances and guidelines. It would take a functional test engineer at least about 10 days to ramp up for such a testing assignment.

Problem 3: Localization Lab set up with native operating systems of multiple locales (i.e. French, German, and Japanese) or virtual machines of different Operating Systems

We need to test the product on native locale OS instead of English. We should have a repository of such operating systems that are accessible to each engineer.

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Problem 4: Appropriate server requirements for on-time availability of localized build to avoid build corruption during data downloading

As localization companies are creating MUL builds having resource files for all locales in the same build, the build size is often very large. Appropriate server should be set-up for transferring such bulky build data.

Problem 5: Availability of localization training documents to create localization test data

All training documents whether related to the project or general guidelines, should be well created and placed at a shared location. During localization testing, we need some locale specific data that we need to create manually.

Problem 6: A lot of efforts required for regression of a bug on multiple locales

If we test a product on 20 locales, generally we observe the same issue on multiple locales. It is really challenging to regress all bugs (say count is 30) for all supported locales (say 20). We should set-up a process to regress all bugs in minimal time and an optimal manner.

Problem 7: Creation of a localized catalog to establish consistency

How we share localized screens of applications to linguistics so they can verify them from linguistic experts is an important consideration. For example, if we have 150 screens per locale per platform, isn't this a challenge to manage with the linguistics?

QA InfoTech's Solution:

Discussed below are solutions that we have adopted at QA InfoTech to address the problems outlined above:

Solution to Challenge 1:

We conduct a kick off meeting for the localization product (for sprint 1) when core (English) first sprint is close to complete. We also arrange a quick demo of the application's functionality so engineers' can prepare a document to ease ramp-up in the short time span.

Solution to Challenge 2:

We conduct ongoing training (including guidelines and nuances) to create a pool of localization (L10N) aware test engineers that can be deployed as soon as a project flows in. The initial product demos, quick and early resolution to queries also help in smooth project execution.

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Solution to Challenge 3:

As we test product for global market, testing should be covered on varied platforms too such as Win XP, Win7, Win8, Win8.1, Mac10.6, Mac10.7, Mac10.8, and Mac10.9. We have prepared a repository of such operating systems for each locale. This repository is accessible to all engineers working on localization products. We also take care of utilities that are required for product testing. Taking this into consideration, we prepare OS images with these utilities. During restoration of localized Operating Systems, the engineer need not install utilities in a repetitive manner. This approach is also beneficial from cost & effort points of view.

Solution to Challenge 4:

As mentioned earlier, the build should not be corrupted during downloading. We have set-up a dedicated server for downloading bulky builds. We just need to enter configuration details of the build location. The server will automatically download latest builds for the required product. The server also checks for arrival of new builds at regular intervals and download them accordingly. This approach helps us save a lot of time.

Solution to Challenge 5:

We have localization training material at shared locations that is beneficial to train any new engineer within a very short period of time. We also create and save localization test data at project kick off. This helps us avoid repetitive efforts around test data creation.

Solution to Challenge 6:

We have set-up a process to assign a locale on which the engineer will regress all 'ToTest' bugs. Earlier, we used to assign number of 'ToTest' bugs of different locales. By setting-up this new process, the test engineer needs to just restore his machine for a single platform/locale and can regress a number of bugs in one go. In the earlier process, the engineer would have to setup localized OSes periodically. This new process has saved a lot of time and efforts for the entire team and more importantly brought in better regression test coverage.

Solution to Challenge 7:

Typically, for linguistic verification of localized screens, we create manual catalogs of localized screens and share with linguistics. During creation of such screens, we observed manual errors besides the massive efforts that go in. To alleviate these problems, we have developed a tool that creates a catalog of number of screens in one go. You just need to have English UIC as well as localized screens on your machine.



Using the new tool we create the catalog in approximately 2 minutes.

Catalogue Maker

Enter the path of the catalogue*

Enter the path of the screen shots*

Enter the path of the final catalogue*

Conclusion:

The above mentioned approaches have helped us organically build a strong localization testing practice bringing in cost, time and effort benefits. Above all, it encourages and motivates our localization test engineers to focus on real problems rather than spend time on setup and other test logistics. Such processes have helped us also show case our difference to our clients winning their support as the localization preferred vendor for several of them.

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About QA InfoTech.

At QA InfoTech (an ISO 9001:2008, 20000-1:2005, 27001:2005 and CMMI Level III certified company), we specialize in providing independent offshore software testing and, unbiased software quality assurance services to product companies, ranging from the Fortune 500s to start-up companies.

Established in 2003, with less than five testing experts, QA InfoTech has grown leaps and bounds with five QA Centers of Excellence globally; three of which are located in the hub of IT activity in India, Noida, one in Chandigarh, India and the other, our affiliate [QA InfoTech Inc. Michigan USA](#). In 2010 and 2011, QA InfoTech has been ranked in the top 100 places to [work for in India](#). For more details, please refer to our [blog on this event](#).

"We assure the highest degree of Excellence and Accuracy in our engagements. Once you have placed your trust with us, rest assured we guarantee an elated peace of mind"

- Mukesh Sharma, Founder & Chief Executive Officer

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