

# Adobe Approaches to Culturalization: Two Case Studies

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**Abstract.** Adobe uses diverse user research methods for our Asian geographies. Our approaches differ depending on the target market and the feature set under consideration. There is no cookie-cutter approach to software culturalization. The target user and software space is the starting point for determining research approaches and areas of focus for design. We will focus on two products from our Pro and Consumer product lines and provide case studies for how these approaches differ for two very different product lines that have been culturalized for the Japanese market.

**Keywords:** Adobe, Creative Professionals, Consumers, Creative Suite, Illustrator, InDesign, Elements, Photoshop Elements, Premiere Elements, Gaiji, Japan, Japanese, Culturalization.

## 1 Introduction

Adobe provides software solutions for creative professionals, enterprise users, and consumers worldwide. While Adobe localizes its products for many countries, those efforts are for the most part interface translations and basic support for international text handling needs. Adobe's culturalization efforts focus mainly on Japan, with small forays into the Chinese and Korean markets.

As experience designers in Adobe's iUx (international user experience) group, we play dual roles of both designer and researcher. Our team has been driving the culturalization of products for the Japan market. To date, we have succeeded in culturalizing all or parts of InDesign, Photoshop Elements, and Acrobat for the Japanese market, while ensuring that basic localization needs are met with the remaining range of our products.

## 2 Case Study One: Professional (Creative Suite)

Creative Suite's InDesign-J supports a Japanese print workflow with unique Japanese text handling features. Because Japanese print workflow has a long tradition, with a system that has been tried and tested over a long period of time, there are many challenges for traditional Japanese print houses to move from the old "Shashoku" print workflow system to a digitized DTP workflow such as that available with

InDesign-J. Most Japanese book publishers and magazine companies now use a digital DTP system, but there are still many pain points in their workflow that have not been fully addressed in the software world.

## 2.1 Design Solutions for Gaiji

One of the previous biggest pain points for Adobe customers was the entry and management of “Gaiji” characters. Gaiji are non-standard characters that have no text encoding values. Before the advent of the Adobe Gaiji creation tool, there was no way for a user to enter Gaiji as text. Gaiji had to be laboriously created as bitmaps and then pasted into text. Users had to re-create bitmaps if there was any change to the font or style, and the bitmaps were hard, if not impossible, to reuse. The Adobe Type team recognized this problem and created a solution from the technology side. The International UE team got involved in the user research and interface design side of the solution.

**The Gaiji Creation Tool.** Gaiji are essentially tiny differences in certain glyphs. For example, “邊” is a variant of the character 辺, which are both read as “be.” The former is considered to be a Gaiji character, while the latter is part of the standard Unicode text encoding character set. The first cannot be entered into a word processing document except as a bitmap, while the second can be entered and edited at will. In order to enter the variant example above into the application we used to write this paper, we had to paste it in as a bitmap.

A small mistake or mismatch in user expectations can have a huge impact on Gaiji creation usability. The Gaiji creation tool is an Illustrator palette that allows pro users to make Gaiji glyphlets in one step with minute levels of control; the palette contains more than 20 detailed controls.

**The Gaiji Management Tool.** Gaiji are technically not part of any character set, so there needs to be a Gaiji management tool which allows users to keep track of their Gaiji glyphlet creations. “Glyphlet” is the term coined at Adobe for a Gaiji creation. The Gaiji management tool (ASGM, or Adobe SING Glyphlet Manager) in Creative Suite is a stand-alone application that installs glyphlets created with the Gaiji creation tool into the user’s system and allows the user to sort, search, add, or remove the glyphlets. The management tool is a mechanism which allows the glyphlets created in Illustrator to be used in other Creative Suite applications.

The Gaiji management tool allows users to view both basic and advanced sets of glyphlet attributes. Users can view five to six basic attributes for each glyphlet in the management tool, and can also go to a detailed view that displays over twenty more advanced attributes.

## 2.2 Japanese Pro Users

Japanese Pro users are very busy and don’t want to spend time on even one additional click. As professionals, the users know the applications in and out. The relationship of Pro users to their bread-and-butter applications can be summed up as: “I want to be able to do everything with shortcuts.” As designers, we need to see Creative Suite

applications in the same way that our Pro users do, as work tools that allow for minute control without sacrificing quality.

### 2.3 Research Methodologies for the Gaiji Tool

Research for the Gaiji creation and management tools began by investigating the pain points of a Gaiji bitmap workflow. This initial investigation was followed up with validation and verification of the Gaiji glyphlet creation solution - through multiple design iterations - via a customer council and a pre-release testing program. These methodologies were chosen because it was necessary to confirm that the solution met pro users' needs in terms of time constraints (ease of use, limited number of clicks) combined with maximum control (allowing minute typographic adjustments to individual glyphlets).

**Validation of Design Iterations.** Adobe obtains user feedback in very early stages of the interface design process, sometimes even using paper mock-ups or drawings on a whiteboard. For this particular set of tools, we ran validation studies with more design iterations than usual and worked very closely with users because it was the first tool of its kind to be released in the market.

**The Customer Council.** The Customer Council consisted of a small number of professional users who we established a long-term relationship with. Unlike the users we normally recruit for lab-type studies, these users had the same level of passion in creating good tools for Adobe users. Their input was extremely valuable for quickly capturing a snapshot of a large number of professional opinions, without much turnaround time.

The Customer Council was also a mechanism whereby Adobe research could build a long-term relationship with council members. Long-term longitudinal study of pro users' professional tool use, including Gaiji creation, was an important criteria for choosing to funnel research via the customer council and pre-release program.

**The Pre-release Program.** In general, pre-release programs are a good way to get user feedback and statistical data. We were able to obtain a broader variety of feedback for the Gaiji tools through the pre-release program. We were seeking a larger variety of feedback from other customer segments – such as beginners –that did not exist in our Customer Council.

## 3 Case Study Two: Consumer (Elements)

The starting point for considering the needs of the Japanese consumer for both design and research is to examine the content requirements of the user. This is done via a broad survey of the culture-specific uses of technology – such as the advent and widespread use of QR Codes in Japan – as well as a deep dive into the yearly activities of our users – in understanding the significance of school “Sports Day,” or seeing the subtle differences in how Valentine’s Day is celebrated in Japan in comparison to America. This approach of examining broader cultural contexts in

order to see the ramifications for Consumer-gearred content design and content creation tools is radically different from the microscopic examination of Pro users' tool-use habits and workflows for Pro application features.

### 3.1 Design Solutions for Elements Creation

The Adobe Elements line, which is targeted toward consumer rather than professional image manipulators, comes packaged with a large amount of content; pre-created templates for users who are not creative design professionals. Content is extremely culture-sensitive, and Japan is a market where yearly events, holidays, and the childhood activities that consumers chronicle with their photo creations differ significantly from those of Western cultures. The New Year's Card and QR Code creation tools are two features in Photoshop Elements which are there to enhance and support the culturalized content experience of the Japanese user.

**Content.** A superficial comparison of calendar events in an American and Japanese calendar will only reveal the obvious differences, but will not reveal the hidden cultural differences with how these "same" holidays or traditions are observed. American and Japanese users of our products both celebrate events such as New Year's, Valentine's Day, Halloween, and Christmas. The oblivious designer based in America might create Christmas content for both users without realizing that the content is inappropriate and in some cases completely unusable for the Japanese user. In order to create culturally-specific and appropriate content, it is necessary to deeply examine the different traditions that are ascribed to even the same holidays. Field research and a collection of artefacts are both necessary components of sorting out and highlighting these subtle yet important differences.

**Creation Tools.** Photoshop Elements contains two creation tools - for New Year's Cards and QR Codes - that are designed specifically for the Japanese user. One additional tool, for Flipbooks (or stop motion animation) creation, was inspired by content creation influences from Japan, but is in all language versions of the application as stop motion animation is a global creation activity. The culturalized content in the Japanese versions of both Photoshop and Premiere Elements is intended to support and enhance all creations, but in Photoshop Elements is also tuned very specifically to creation needs for Japanese-style New Year's cards and QR Codes.

### 3.2 Japanese Consumer Users

Japanese consumers use image editing software for fun and enjoyment, rather than for work. Users want a large amount of content variety and the means to enhance their photos easily. Consumer tools are not used day-in and day-out like professional tools, so features and content must be easily accessible and not difficult to use; our consumers want to focus on quick, fun, easy creation rather than on the creation process itself. In addition, the Japanese consumer requires content and tools that are a natural extension of the Japanese cultural environment. For instance, a QR Code creation tool does not make sense in America, where mobile bar codes are not widespread or even viewable on American mobile devices, but the tool completely

natural to the Japanese user, who sees and might even use QR Codes with their mobile on a daily basis - perusing a magazine, looking at a billboard, watching TV, or browsing online.

### 3.3 Research Methodologies for Elements Content and Creation Tools

The research focus is on how best to support the creation needs of the Japanese consumer. We have taken a two-pronged approach to research in our consumer segment.

**Participant Interviews.** A long-term strategic research project took a broad look at the means and meanings behind how users keep and archive their memories. Rather than researching a small number of people longitudinally, as was the case with the Pro Gaiji research, this particular Consumer-based research focused on interviewing a cross-swathe of the target user segment as to their image-taking and content creation habits. This type of research has provided invaluable information about the types of content and content creation tools our Japanese consumers desire and need.

**Field Work.** The second research approach was devoted to identifying and analyzing our users' content needs by closely examining yearly Japanese calendar events. This was done by going on field visits to a large variety of stores in Japan, with a particular focus on stores frequented by our consumers. We collected artefacts such as cards, books, magazines, and flyers from these stores. Our collected artefacts helped the content creator drill down in areas noted as particularly important by our interview participants and to identify the important events to create culturalized content for.

## 4 Conclusion

Our two case studies show the value of not only researching different geographies, but to also think about the target users' needs when identifying and running research studies that lead to the creation of satisfying culturalized design solutions. As we stated at the beginning, there is no cookie-cutter approach to software culturalization. The target user and software space needs to be examined for determining appropriate research activities as well as useful application features.