

# Sharing the Continental Airlines and SDL post-editing experience

**Adriana Beaton**  
SDL International  
1100 McCaslin Blvd.  
Superior, CO 80027  
USA  
abeaton@SDL.com

**Gabriela Contreras**  
Continental Airlines  
1600 Smith St.  
Houston, TX 77002  
USA  
Gabriela.Contreras@coair.com

## Abstract

This paper highlights the results and trends on post-editing and machine translation from the recent AMTA and SDL Automated Translation Survey. Then Continental Airlines and SDL share their experiences, and the benefits and challenges of human post-editing.

## 1 Introduction

Since 2008, SDL has been monitoring global organizations on their usage of machine translation through annual surveys. In December 2009, SDL joined forces with the Association for Machine Translation in the Americas (AMTA) for the 2009 Automated Translation Survey. For the first time this survey included questions on the usage of post-editing with machine translation.

It is 10 years since SDL first investigated machine translation technology. This resulted in the acquisition of the Transcend machine translation technology from Transparent Language in 2001.

SDL has been using machine translation and human post-editing with global customers since 2004. In July 2010 SDL acquired Language Weaver, the pioneer of statistical machine translation.

This paper shares the experience of Continental Airlines' use of machine translation with human post-editing.

## 2 Current Trends in Machine Translation

The AMTA and SDL 2009 Automated Translation Survey of senior representatives in global organi-

zations recorded a 5% increase in respondents using or planning to use machine translation since the 2008 survey. In the same period, 50% of respondents reported they are more likely to use machine translation compared with 2 years ago. This represented a 10% increase in one year. 30% of all respondents indicated they were already post-editing or had imminent plans to do so.

The SDL findings were similar to those from other research, like that done by The Gilbane Group, now a division of Outsell, Inc.<sup>1</sup>, who in 2009 reported that 30% of companies were using machine translation, while 18% were post-editing.

The biggest barrier to the adoption of machine translation by global business was the quality of machine translation. Of course, this is exactly what post-editing addresses.

## 3 Post-editing

The benefits of post-editing are delivering high quality translation, reducing translation costs (or delivering more content within the same budget) and delivering translations faster. Globally 57% of respondents stated they were more likely to adopt machine translation as a result of human-post editing because of the improved quality it delivered.

### 3.1 When to use Post-editing

Human post-editing of machine translation works well on structured content like technical documentation, user guides, product manuals, product support articles and product alerts. These may be

---

<sup>1</sup> The Gilbane Group, Multilingual Product Content: Transforming Traditional Practices into Global Content Value Chains, June 2009

traditional printed documents, digital documents or website content.

A machine translation engine can be customized through training to suit these domains and deliver a level of translation quality that makes post-editing effective. If machine translation does not deliver a sufficient quality translation, then the post-editor is often not productive enough to justify post-editing, compared to just using human translation of the original content.

## 4 The SDL Experience

SDL has an established 300-person strong post-editing team which has been post-editing rules-based and statistical machine translation since 2004. In this time we have found that:

Having all machine translation content reviewed and post-edited by professional linguists guarantees high quality

Post-editing is 2 to 5 times faster than conventional translation, but the post-editing speed varies by language.

Post-editing eliminates the need for the review of translation from multiple human translators for consistency. Only a final quality check is required.

Machine translation technology is still advancing so post-editing strategies have to evolve in line with the technology.

Having a proven process to ensure feedback from post-editors is used by the trainers of the machine translation engine improves quality over time.

## 5 The Continental Airlines Experience

A few years ago, despite being a global organization, Continental Airlines translated only a few pages of its website into Spanish. The rest of the site was available only in English.

To be a strong competitor in the global market and to better serve their customers they decided to offer more languages on the website.

The first step was to automate the translation process, to eliminate manual steps and improve efficiency. Adding an online translation and review process, introducing translation memory, a terminology database and style guides with SDL Trans-

lation Management System™ reduced costs and improved quality and consistency.

### 5.1 The Challenge

Automating the translation process reduced the content translation time to approximately one week with another week for the review process.

For a website such as continental.com, a two-week turnaround time was too long as content is continually being added and updated - sometimes a page is updated several times a day. By the time the content came back from translation and review, it would be outdated. There would be newly updated content that would now need to be sent out for translation. This process made it nearly impossible to maintain an updated site.

Three things were needed to successfully market products and services offshore:

- Improve the turnaround time
- Control translation costs
- Maintain the quality of content

### 5.2 Investigating Machine Translation

Continental Airlines decided to research machine translation. Unfortunately, the more they learned about machine translation, the more complicated it appeared. Also, none of the solutions met the needs because machine translation was not really suitable for marketing content. The web site contains a lot of very straight forward information related to policies, schedules and flight information, but it also contains a lot of marketing and merchandising information.

### 5.3 Machine Translation and Post-editing

Then Continental Airlines found out about the SDL Knowledge-based Translation System™ (SDL KbTS), the integrated machine translation and post-editing solution offered by SDL.

The use of machine translation addressed the Continental Airlines need for a faster turnaround time and the human review process ensured that the content was the appropriate quality before moving it to production.

Implementing the SDL KbTS solution, which includes machine translation, post-editing, review and full integration into the translation environment; resulted in a more efficient and automated process.

The results not only reduced the average translation turnaround time to less than a week, but it also reduced costs by an average of 30% and maintained quality by ensuring consistency in the translations.

## **References**

- Ciarlone, Kadie, Laplante. 2009. *Multilingual Product Content: Transforming Traditional Practices into Global Content Value Chains*. The Gilbane Group.
- Harpham. 2010. *SDL Research - Automated Translation Survey 2009*, [www.sdl.com/machinetranslation](http://www.sdl.com/machinetranslation)