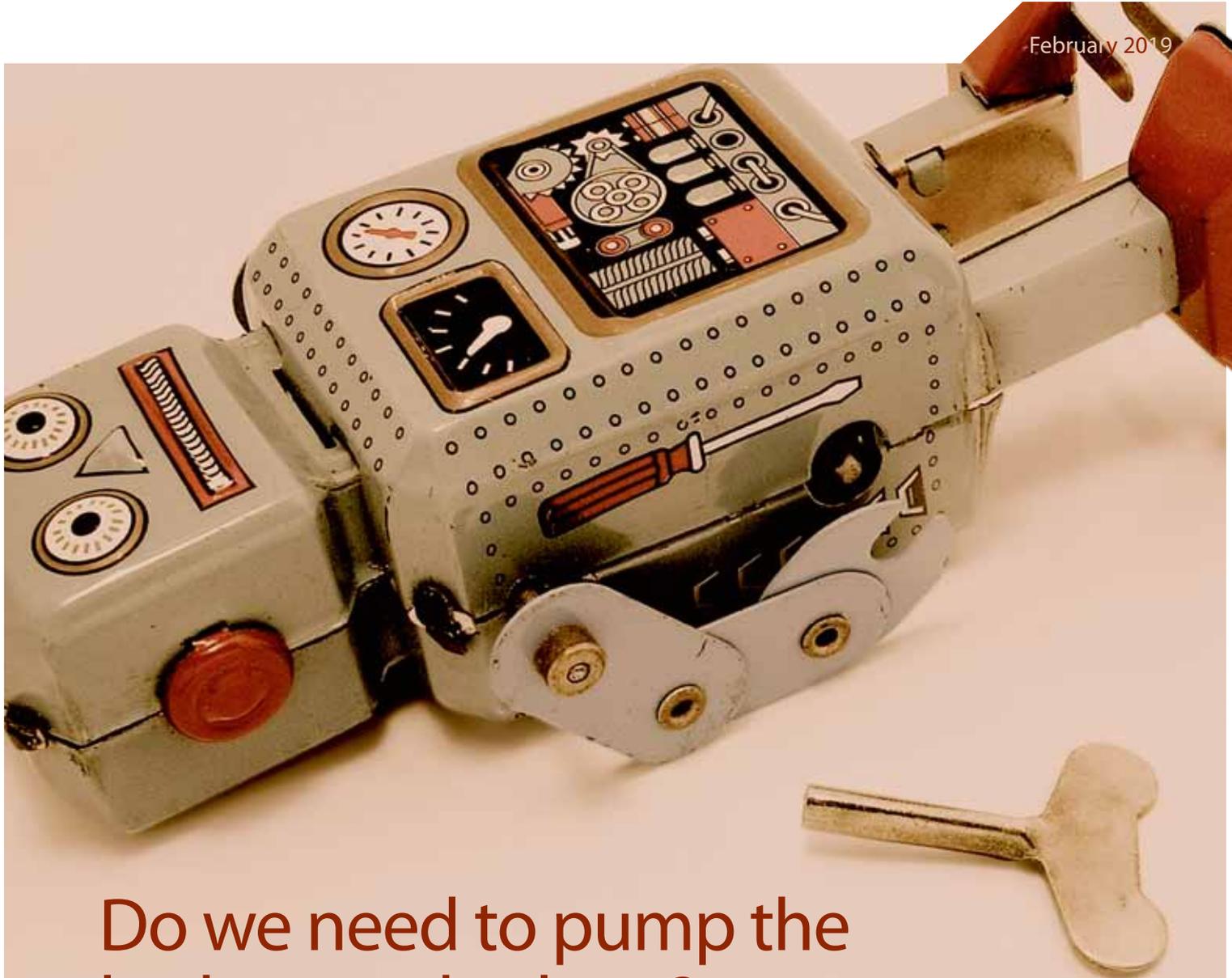


magazine for international information management

tcworld

February 2019



Do we need to pump the brakes on chatbots?

While undeniably popular, chat still often fails to deliver results

“Everybody sells” –
it’s not just a slogan anymore

How technical content can directly contribute to customer acquisition

Language technology to the rescue

A new translation memory tool offers support during a humanitarian crisis

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tcworld

magazine for international information management



If you are a regular reader of *tcworld magazine*, you might have noted one particular irony: We dive deep to illuminate the current state and future outlook of how we create and deliver content on multiple channels to suit our audiences. Yet, we present these insights to you the old-fashioned way: in a printed magazine.

At the end of the 20th century – when online publishing was still in its infancy – it was predicted that printed media would cease to exist within a decade or two. While newspapers and printed magazines have certainly experienced a radical decline in subscriptions and numbers of readers, we now have some assurance that this decline is not endless.

Despite the vast range of news apps that you can choose from on your smart devices, millions of people around the world still sip

their morning coffees while enjoying their printed newspapers. Marketing professionals have witnessed a revival of printed advertisements as companies are starting to realize that print offers something unique: The simple act of buying a publication or receiving it in the mail inspires people to read and engage with it in a way that digital media can't compete with. People take more time to read an article in a printed magazine than they do with the same article online. And as a result, the content, images – and yes, even the ads – are viewed longer and engaged with on a deeper level.

According to our author Alan Houser, even in technical communication the old-fashioned way is still very much alive as “millions of knowledge workers (and many technical writers) will continue to author unstructured

long-form documents using conventional desktop publishing applications”. (See his article on page 17 ff.).

The power of the printed word notwithstanding, a new era characterized by Artificial Intelligence (AI) and Virtual Reality (VR) has arrived. It challenges technical writers to reconsider the way they create and deliver content. New output channels such as chatbots require us to re-think what information users are looking for and find most helpful. While these developments demand content that is concise, easy to find and quick to absorb, they can also inspire us to find new value in the in-depth, soothing content of a printed manual – or magazine.

Enjoy our present issue!

Corinna Melville

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Do we need to pump the brakes on chatbots?

Who consults a user manual these days when you can simply ask the chatbot? But while chat has become the most popular form of support, it often fails to deliver what customers are looking for: a solution to their problem.

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“Everybody sells”– it’s not just a slogan anymore

Technical content provides great value and can directly contribute to customer acquisition and retention.

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Language technology to the rescue

To help rescue efforts during a humanitarian crisis, Translators without Borders have developed a translation memory tool: Kató Speak could also benefit the commercial market.

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TAUS LAUNCHES MATCHING DATA

TAUS has launched Matching Data, a new technique of selecting language data for the training and tuning of machine translation (MT) engines. This new approach fits the new generation of Neural MT, which is much more sensitive to the quality of the training data. Matching Data empowers MT developers as well as Language Service Providers to efficiently compile customized corpora for building their own domain-specific translation solutions based on an example data set.

<http://taus.net>

LIONBRIDGE ACQUIRES GENGO

Lionbridge, a provider of localization services, has acquired Gengo, Inc., a technology company providing crowdsourcing, machine learning and localization services. The purchase includes Gengo.ai, a platform that provides AI training and data services. Matthew Romaine, cofounder and CEO, and the rest of the Gengo team will join Lionbridge post transaction and assume key leadership roles in the company.

www.lionbridge.com

FIVE FUTURE STATES OF CONTENT

SDL, a service provider offering content creation, translation and delivery, has revealed that its *Five Future States of Content* have become a reality, after a series of its innovations that have been incubated over the past year have begun to deliver solutions based on Artificial Intelligence (AI) and Machine Learning (ML). These developments, which span across the content supply chain, not only help global brands move from manual to autonomous futures as they evolve towards a global content operating model (GCOM), but enable them to create compelling content that drives continuous customer experiences.

www.sdl.com

Over one third of organizations have implemented AI

The number of enterprises implementing Artificial Intelligence (AI) grew 270 percent in the past four years and tripled in the past year, according to the Gartner, Inc. 2019 CIO Survey. Results showed that organizations across all industries use AI in a variety of applications, but struggle with acute talent shortages.

"Four years ago, AI implementation was rare; only 10 percent of survey respondents reported that their enterprises had deployed AI or would do so shortly. For 2019, that number has leapt to 37 percent," said Chris Howard, distinguished research vice president at Gartner. Gartner gathered data from more than 3,000 CIO respondents in 89 countries across major industries, representing US\$15 trillion in revenue and public-sector budgets and US\$284 billion in IT spending.

Game-changer with a talent shortage

The deployment of AI has tripled in the past year – rising from 25 percent in 2018 to 37 percent today. The reason for this big jump is that AI capabilities have matured significantly, and thus enterprises are more willing to imple-

ment the technology. "We still remain far from general AI that can wholly take over complex tasks, but we have now entered the realm of AI-augmented work and decision science – what we call 'augmented intelligence,'" Mr. Howard added.

CIOs have realized that sustainable digital transformation and task automation go hand in hand. AI has become an integral part of every digital strategy and is already used in a variety of applications. Survey results show that 52 percent of telco organizations deploy chatbots and 38 percent of healthcare providers rely on computer-assisted diagnostics. Other operational use cases for AI are fraud protection and consumer fragmentation. The more enterprises work with AI, the clearer the deployment challenge becomes. Fifty-four percent of respondents to a Gartner Research Circle Survey view skill shortage as the biggest challenge facing their organization.

"In order to stay ahead, CIOs need to be creative. If there is no AI talent available, another possibility is to invest in training programs for employees with backgrounds in statistics and data management," Mr. Howard said.

www.gartner.com



Image: © ipopba/istockphoto.com

Translation technology trends for 2019

MemoQ has launched *The memoQ Trend Report 2019*, exploring developments within translation technology and related fields. The report debates five trends that have become prominent themes worldwide. Insights include:

- The on-demand entertainment market is booming, and this has led to an increase in the need for audiovisual localization.
- Since 2009, the translation industry has doubled and it's still growing. The number of language service providers (LSPs) is rising in accordance with the market.
- The need for reporting and analytics isn't new, but many global companies are not yet measuring it. Both translation software companies and buyers desire better reporting.
- "Everybody should be using MT. Otherwise, they might have a significant disadvantage compared to competitors," says Gergely Vándor, product manager at memoQ.
- Because a person can speak more quickly than type, many believe voice recognition technology could eventually become more popular than predictive typing.

www.memoq.com



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The most multilingual brands across 37 industries



Image: © kobrin_photo/istockphoto.com

How many languages do leading global brands speak online? For the past 11 years, independent market research firm Common Sense Advisory (CSA Research) has studied the world's most prominent websites to identify the multilingual leaders of the global web. These business and consumer websites represent the biggest companies, most popular websites, and most valuable brands based on Forbes Global 2000, Brand Finance Global 500, Alexa Top Sites, Mozilla Top 500, and others.

Based on CSA Research's proprietary methodology, the data, findings, and analysis are detailed in the firm's report, "Global Website Assessment Index 2019," and further expanded upon in "Top

Target Languages by Vertical Sector: 2019," which examines language flows by industry.

"The Global Website Assessment Index 2019" documents languages and social network links on 2,817 of the world's most prominent websites in 37 industry sectors. The report includes 37 data-rich graphics displaying the relative popularity of languages and social networks found on each sector's leading websites – and whether the language is a source or target. It reaffirms the position of English as the global lingua franca, but also shows the rapid rise of Chinese and the continued concentration of website localization into core economic languages even as the long tail seen on the most multilingual sites

expands. These central languages are becoming must-haves as sites expand, with increasing numbers required for enterprises to be seen as globally competitive. The research also reflects the increasing prominence of languages such as Indonesian and Hindi that CSA Research predicts are on the cusp of a period of hyper-growth.

Top multilingual industries and brands

The study found that the top three multilingual industries all involve companies with significant R&D requirements and consumable products. Industries that consistently deploy the greatest average number of languages include automotive, computer and electronics, and consumer goods. Conversely, the most multilingual brands fall in the social networking and online services categories, even though overall averages in these categories are lower. Leading the way are Google (146 languages), Facebook (141 languages), and Vkontakte (85 languages).

The companion piece, "Top Target Languages by Vertical Sector: 2019," looks specifically at the top target languages for sites, by sector, authored in English versus those authored in other languages. It includes a data file that allows clients to explore specific language pairs in individual industries or combinations of industries. Dr. Arle Lommel, senior analyst at CSA Research, comments, "Every year, enterprises try to calibrate their language strategy to achieve the best return on investment and to position themselves competitively in a global market. Our comprehensive and proprietary research is especially valuable as they benchmark their language performance against leading competitors and decide where to make strategic investments to grow their markets. The research enables global organizations to make informed decisions on language choice and selection."

www.csa-research.com

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Conferences: something for everyone

Text by Leah Guren

It is no secret: I am a big fan of conferences. I attended my first professional technical communication conference over 25 years ago and have been happily participating in them ever since. For the past 20 years, my role has mostly been that of a speaker, but I still find the conference experience to be overwhelmingly beneficial for professional development.

The tcworld conference in Stuttgart is one of my favorites. It is well organized, impressively large, and has a lot of variety. I was recently talking to a colleague (rather enthusiastically) about my experiences there. He shrugged and said, "Conferences are so expensive. I don't really see the point. I can read the articles in the journals or watch a YouTube video."

He is not the only one who feels this way. Over the years, I have met many people who fail to understand the value of professional conferences. Often, they have never actually attended a conference, or perhaps they went to one small local event. This is unfortunate, as such people are missing out on one of the most profitable ways of investing in their careers.

So, what's so great about conferences? Quite a few things, actually!

Educational sessions

In our career, there is an ongoing need for continuing education. We either need to perfect basic skills, learn advanced techniques, or develop skills to help us handle new challenges at work. There are many ways to do so, such as reading professional journals, attending webinars, or even signing up for classes. But a conference offers all of this in a much more compact format. Over a few days, you can listen to multiple sessions on a related theme or topic. You can even participate in workshops for a hands-on learning experience.

The latest thing

One of the challenges of working in a technology-intensive field is that there is an overwhelming amount of new information every year, including new methodologies, standards, and ever-changing technologies. We want to stay on top of all these changes, but it is not practical to invest endless hours of research and reading. Conferences are a great way to get a quick, efficient high-level overview of many new topics. Over the years, I have attended many sessions where I was able to quickly understand the

basics of the latest buzzword. For those of us who are auditory or visual learners, it is more effective to attend a live session than to read a series of articles. And with the interactive aspect of being able to ask questions, you have an excellent way to be exposed to new ideas, to stay aware of changing trends, and to determine where you need to invest your time and energy in further in-depth study.

New ideas

Most of us have deadlines and work pressure that keep us focused on the immediate demands of the products we document. It is very easy to become used to doing things a certain way. We fall into a rut and find it difficult to come up with creative solutions to problems. Conferences are the ideal "whack on the side of the head" to get us to think creatively, consider alternate solutions, and be exposed to ideas or methods that we might not have discovered on our own. I love attending sessions that have (seemingly) nothing to do with any of my current projects, yet make me think about how I could add those ideas to part of a content strategy for a client. When people present case studies or share their experiences, we have an opportunity to see how others may have solved problems in a different way. I cannot think of another way to be exposed to new ideas so painlessly.

Different levels of information

Sometimes I hear people complain that conferences are for novices. Nothing could be further from the truth. Most conferences have a variety of sessions to meet the needs of a wide range of practitioners, from novice to experienced. Well-organized conferences clearly label sessions to help attendees select the right ones. If a TC





Images: Leah Guren presenting at the tcworld conference in Stuttgart in November 2018

© Roman Hermann

with two decades of experience attends a session called "Basics of Document Editing," then it is their own fault if they are disappointed with the level of information! In fact, I find conferences ideally cater for the fact that most of us are both experienced and novice at the same time: we have areas of expertise, but there are other areas where we may lack any experience. At a conference, you can select the very advanced sessions you need and still attend some basic level sessions about topics with which you are unfamiliar.

Networking

Networking is one of the most valuable aspects of conferences for senior TCs, especially those of us who run our own businesses. We can reconnect with business partners, set up meetings with new potential clients, and maintain contacts. Sometimes just having a cup of coffee with a client is an important part of maintaining that long-distance business relationship.

Vendors

Conferences with associated trade shows provide easy access to software and service vendors. You

can meet with many different vendors of similar tools, see demos, ask questions, arrange for trial versions, and more. I enjoy seeing products that I don't yet need; I can mentally file that information away for the future. It is a great feeling to be able to provide a client with the name of a product or company that may be able to solve a problem. You never know when a client might need to do something.

R&R (rest and relaxation)

Conferences get you out of the office and away from your work environment. If you have traveled to a conference, you may be in a different city (or even country). You can take advantage of conference-organized tours or outings, or just explore on your own. Spend a morning in a museum or take a late afternoon break to explore. These little mini-vacations are important for our mental health! And of course, you can meet old friends and make new ones. You'll return to work feeling energized.

Still not sure? If you have never tried a conference, I challenge you to try one in 2019. There are

large conferences, small conferences, general TC-related conferences, specialty topic conferences, and even tool-related conferences. Take the plunge and see how conferences can help you learn, grow, evolve, and invest in your career.

ABOUT THE AUTHOR

Leah Guren

is the owner/operator of Cow TC. She has been active in the field of technical communication since

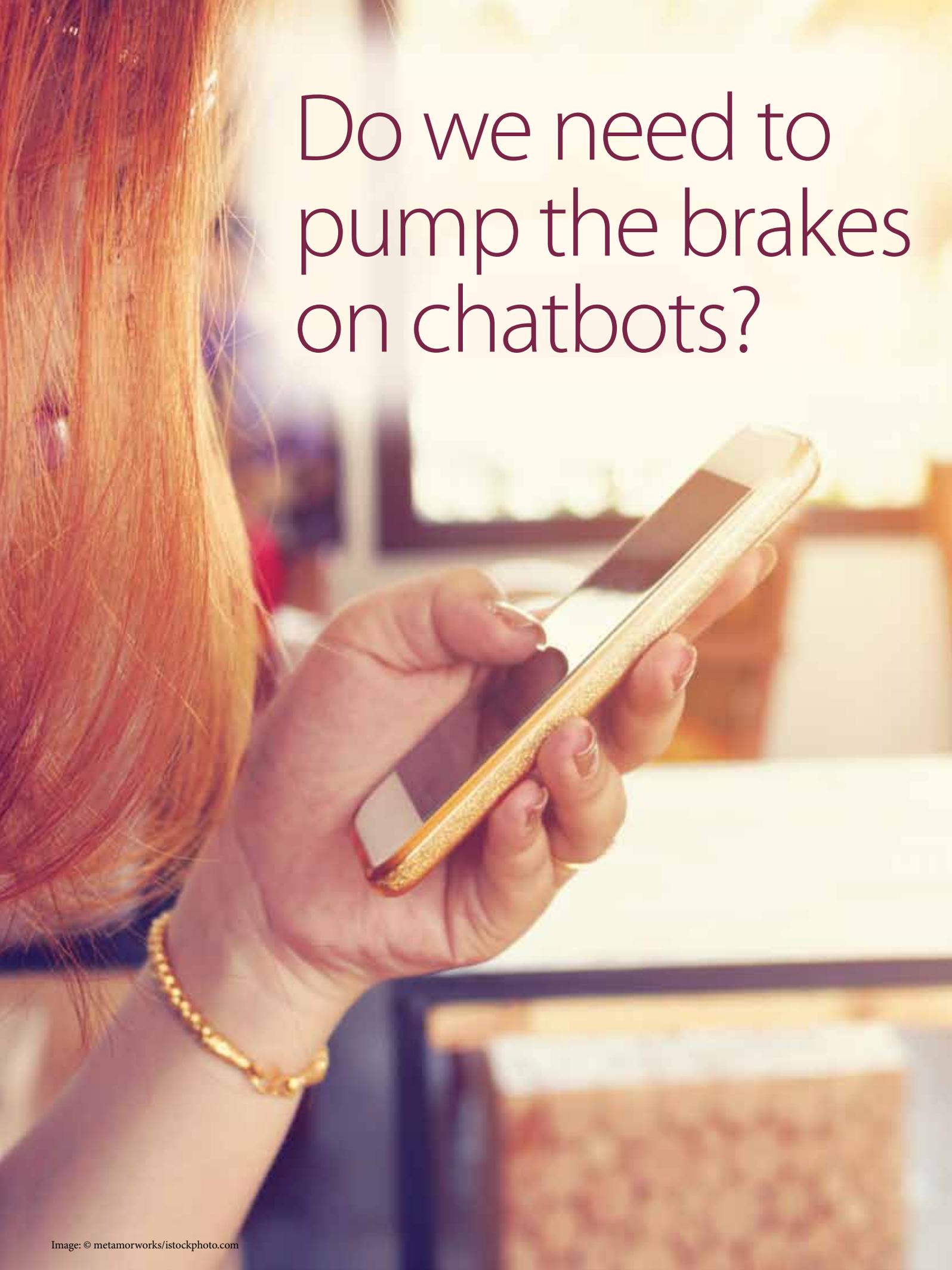


1980 as a writer, manager, Help author, and usability consultant. She now devotes her time to consulting and teaching courses and seminars in technical communication, primarily in Israel and Europe.

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www.cowtc.com

Do we need to
pump the brakes
on chatbots?



Health Insurance Bot

BOT Hello Human!
How can I help you?

I need a health insurance plan 

BOT How old are you?

27 years old 



In the last decade, chat has become the most popular platform for customer and technical support. Support is a huge cost for business. With the hype around Artificial Intelligence and deep learning, there's a lot of excitement about the possibility of replacing live support with chatbots. But a deeper look shows the technology has a long way to go.

Text by France Baril

Technical communicators, especially those who work with structured content or other tools that support multi-channel publishing, can play a big role in providing high-quality content for chatbots to draw answers from. But before we jump headlong into the wonderful world of chatbots, it's important to take a step back. We need to understand two aspects of this technology in order to proceed successfully: Why people love live chat, and how chatbot support fits into their experience as a whole.

Live chat is well-loved

The following stats show clearly that live chat is growing in popularity and adoption:

- Chat adoption rates have risen from 38 percent in 2009 to 58 percent in 2014, which is a compound annual growth rate of 8.8 percent over that time. (Forrester)
- 53 percent of customers would prefer to use online chat before calling a company for support. (Harris Research)

- Chat has become the leading contact source within the online environment, with 42 percent of customers using chat versus email (23 percent) or other social media forums (16 percent). (J.D. Power)
- 62 percent of customers expect live chat to be available on mobile devices and, if available, 82 percent would use it. (Moxie Software)
- 63 percent of millennials prefer to have their basic customer support questions answered by chat versus traditional channels. (Software Advice)

Why business is excited about chatbots

Businesses have been responding to the popularity of live chat by including it as a channel for customer service and technical support – but at no small cost. Contact centers (once known as call centers) represent huge costs. The idea that live support could be replaced with chatbots has business salivating over cost savings. Analysis firm Juniper Research estimates the technology could save business US\$8 billion by 2022. Advances in Artificial Intelligence and deep learning are spurring interest in the development of chatbots. But in the excitement of new technology and the benefit to business, we seem to have overlooked the user experience. A closer look at what users like about live chat will help make sure we don't break what's working in the rush to replace live chat with bots.

What people like about live chat

There are many reasons people prefer chat over email and phone. As we task bots with taking on more of the workload, we need to consult these reasons:

- 79% Questions answered immediately
- 51% Can multitask
- 46% The most efficient method
- 29% In control of conversation
- 29% Better information than email
- 22% Don't like talking on the phone
- 21% Can chat from work

Source: eConsultancy 2013

When chatbots work, it's because they deliver on those customer preferences. But they don't always work as planned.

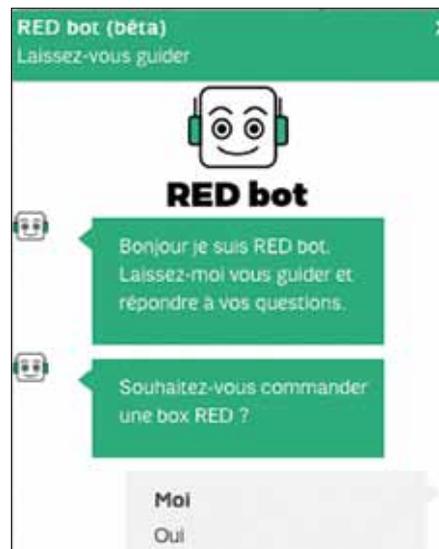
Chatbot fails

Because chatbot technology is still in its early phases, there's not a lot of data to look at. It is possible, however, to look at real-life experiences to see whether bots are delivering on all the things users love about live chat. Let's take a look at how chatbots have worked for me and others in the last year.

Scenario 1: The bossy bot that shuffles you along

Having recently moved from Canada to France, I needed a new mobile phone. I went online to buy phone and internet services from Red by SFR.

After hitting an obstacle with payment options in self-service, I clicked on the chat icon and was connected to Red Bot. Red Bot told me it was here to answer my questions. Great! But then Red Bot proceeded to ask me yes or no questions.



Translation:

Bot: Hi, I am RED bot. Let me guide you and answer your questions.

Bot: Do you want to order a RED box?

Me: Yes.

Next, Red Bot redirected me to a live rep by asking me to enter my phone number.



Translation:

Bot: Very good, I will put you in contact with one of our representatives.

Title after picture: Your Team RED representative.

Text: Enter your phone number so we can call you starting now. Your number:

Placeholder in field: Enter your number here.

This was a problem because I didn't yet have a French phone number. After all, this was the reason why I was trying to get phone service in the first place! I tried my Canadian number, which they couldn't call.

Next, I had to go out and buy a prepaid card from another provider so I could speak with a customer rep.

I entered the phone number and waited for ten minutes.

Finally, the rep came on the line and asked if I wanted to buy their services. Yes, I said, but I have a few questions about payment options. With a tone of annoyance, he told me that he's just here to take orders, not answer questions. While the rep's rudeness wasn't the fault of the bot, the interaction underlined a clear failure to align channels.

Needless to say, I did not buy my phone from Red by SFR.

Here is a summary of the failures I experienced that could have been prevented in a live chat:

- Don't like (or can't) talk on the phone but redirected there anyway
- My question is not answered immediately (or ever)
- Not in control of the conversation

Scenario 2: The bot that's just a less powerful search engine

If your customers wanted to find answers from a search engine, they would have started there! In fact, they probably did.

Here's a bot attempting to help someone buy clothes. The chat-like interface is really just a thin imitation of a faceted search – a filtering down of options until the desired target is reached.

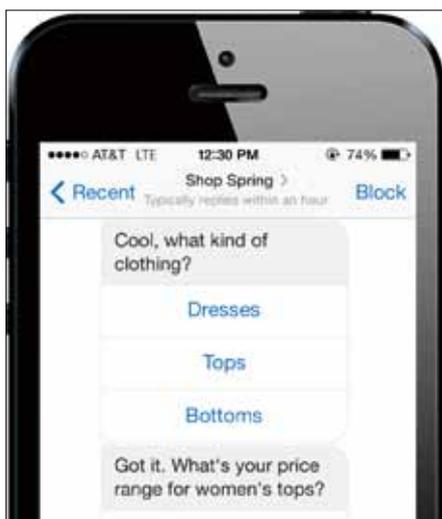


Image: <https://netleon.com>

The problem is the chatbot doesn't have the capability or real estate of Amazon. Does the customer want dresses, tops, or bottoms? Uh, what if she's looking for a hat? Is that considered a top?

It's also forcing the customer to use filters that might not be important to her. What if she doesn't care about price?

The meta issue in this example is that the chatbot is not actually chatting. Its search is disguised as chat. This trick comes up a lot. Businesses know that users like chat and so offer the interface for functions that aren't chat. This bait-and-switch only adds to users' frustration. If you're going to use a talk bubble, make sure you can talk.

Summary of failures compared to a live chat offer:

- Not in control of the conversation
- Question not answered immediately

Scenario 3: The bot that needs technical support

Humans, unlike bots, don't glitch. Where does the customer turn for help when the chatbot isn't operating as designed?

In the example below, using a service in France, the chatbot is answering half in French, half in English, with my phone preference set to Spanish. ¿Que?

On top of that, every message is repeated, and variable data isn't filled.



Translation:

Larger boxes: Service unavailable. Try again later or contact customer support at 353.

Placeholder: Write an SMS from Lycamobile.

This experience, like the previous example, is also only chat-like. The user is not allowed to ask questions. In fact, they have to get the codes for questions from the support web site.

Summary of failures compared to a live chat offer:

- Question not answered immediately
- Inefficient
- Not in control of the conversation

Scenario 4: The bot that only gets in the way

After getting a new phone number, I needed to update my bank profile. First, I logged onto the bank's website hoping that I could do it myself. In the global user experience, this is self-service

customer support. From the user perspective, this is level 1 support.

No luck. The field for the phone number was grayed out (disabled).

Next, I looked for answers in the help section of their website. I was now at level 2 customer support. I used the search and found some instructions that told me to go to the profile page I had just visited. My problem still wasn't resolved.

I went on to the chat – level 3. I got a bot that directed me to the same article I had already read. The bot asked if this answered my question. No, it did not.

The bot directed me to a form for email support. To me, that's attempt number 4 for support.

I received an automated email saying that someone will answer my question in 24 to 48 hours, but in case it was helpful, it suggested that I read that article AGAIN. The content architect in me smiled at the fact that this business nailed content reuse, yet I still didn't have my answer.

After some back and forth through email with a real person, they finally changed the phone number for me, after validating my business registration. For security reasons, the phone numbers of business accounts can only be changed by a customer representative. Mine was an exceptional problem that couldn't be solved through information already available.

Summary of failures compared to a live chat offer:

- Question not answered immediately
- Information was not better than email
- Inefficient

Chatbot successes

We've discussed some of the glorious ways chatbots in customer service and technical support fail. But that's not to say they are a total loss. The chatbot potential is real and, in time, they may be able to replicate the benefits of live chat.

But for the time being, their success is limited to three distinct areas:

- Entertainment and simple questions
- Upsell
- Information gathering before connecting to a human

Entertainment and simple questions

Chatbots are well-suited to serve as a vehicle for entertainment and providing simple benefits to users.

A good example of this was a bot that is sadly no longer with us called Poncho the Weather Cat. Poncho provided a simple benefit: telling users the weather – but with a dash of humor and sassy personality. (“I feel good about the weather. It isn’t perfect, but neither is my homemade beer.”) Poncho worked because the service was reliably deliverable. There’s lots of data about the weather that the bot could draw from. And people seemed to prefer it to a regular weather app on their phone because of the entertainment factor. They got the weather and mild diversion.

Upsell

Chatbots show strong potential for sales. We know upselling clients with closely related products already works in other channels. Unlike with customer support, upselling doesn’t require the bot to answer the customer’s specific question. Instead, it can draw from a wider net and make many offers that might be appealing.

Information collection

Chatbots can save time and money as information collectors before the user is connected to a human. In these cases, the bot gathers the kind of information that’s needed for the service to be completed, but that doesn’t require human interaction. Melody by Baidu is a chatbot that helps doctors diagnose medical conditions. Before the patient speaks to a doctor, Melody asks them simple questions such as their age and what kind of symptoms they’re having. In other contexts, this might be done by a triage nurse. It’s a type of work chatbots handle well because the goals and scope are simple.

Why chatbots fail when it comes to support

Clearly, chatbot technology isn’t working in the customer service and technical support fields as well as it could. This is primarily due to two overarching errors in approach: Chatbots are only re-serving information that’s available in other channels. Second, development teams overestimate the maturity of the technology.

Re-serving content

Bots may not be necessary in many cases. If they’re going to be added to the user story, they must add value, not just be an extra step between the user and their answer. Support-

ing many channels doesn’t mean forcing users through all of them.

The bank in Scenario 4 successfully reused content, but their lack of tracking of the overall user experience made it worse than if they had had fewer channels. In this case, the best solution isn’t even providing support content. When I logged in, the system should have been able to see that the account was for a business, and I should have had access to the email form from a button or other control beside the grayed-out phone number field. Help is where people go after they experience a first failure.

Redirecting users to other, less preferred channels, as Red Bot did, is a related form of this error. If the bot can’t answer the user’s specific question, then you might do better not to offer it as a channel.

Overestimating the maturity and capacity of the technology

Implementing real conversation is hard. That’s why in three out of the four fail scenarios, the bot didn’t even allow questions.

Even with the bank’s bot that was actually able to chat, at least in the sense that it allowed questions, it was only able to solve a problem that had already been solved, where the solution had been stored in the available data. The bot can’t guess at solutions. It can only ask questions that lead it to the answer it has already been provided with.

At the same time, developers and businesses are underestimating the expectations users have of chatbots. By the time a user gets to chatbot support, they’re expecting a customized resolution to their problem. To give them generalized help is insufficient.

Takeaways

Live chat works because the human interaction allows users to feel in control of the conversation and to receive an immediate and tailored answer. Often, users also get an answer or support that wasn’t available in the existing self-service material.

Bots, if they have been trained with the information available in your system, are just another channel. They can’t bring users the feeling that they will finally get someone to help with the operation they couldn’t perform on their own.

Before you fall for the hype, it’s important to consider the role chatbots will play within the global user experience. Are they going to be one more obstacle between users and their answers, or are they really going to support them? Bots are expensive to develop, train, and deploy. They require new training every time a product or update is released, and they need to learn to decode questions in all the languages that the business supports. Businesses need to carefully weigh the value a chatbot brings against the significant investment of time and money.

Let’s not create the next phone tree

If you’re a certain age, you might remember when phone support worked. You experienced a problem you couldn’t solve through the manual or the website and picked up the phone. You got a person right away who listened to your problem and, most of the time, solved it. Today, business managers and technology experts have figured out ways to automate phone support. Oh, the money they can save! Meanwhile, they have broken what was working. Phone support became the living hell it is now – a maze of “press 1’s” that more often than not leads to a dead end. That’s one of the reasons why people prefer live chat!

As we go forward in the development and design of chatbots, let’s consider this cautionary tale. Rushing to automate a system while ignoring what works about it will only lead to its eventual abandonment. Then we’ll find ourselves chasing the next big thing all over again.

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Is this the end of user assistance as we know it?

Practices around intelligent content and Information 4.0 are becoming increasingly popular in technical communication. Some predict massive, disruptive changes to the way our users consume information, and how we author and deliver it.

Text by Alan Houser

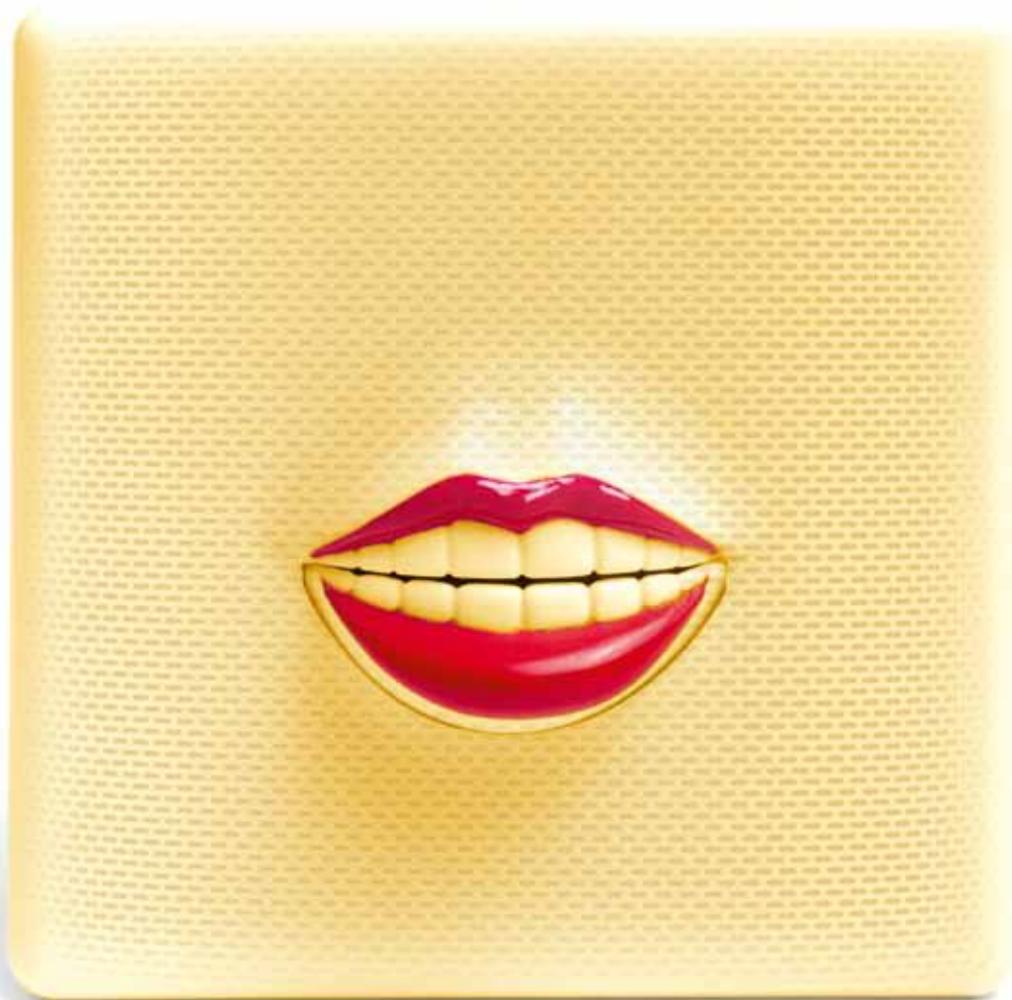


Image: © Jay Pierstorff/123rf.com

With new approaches to creating, managing, and delivering user assistance, how will the practices of technical communication change? How will they remain the same? Can we, as technical communicators and as a profession, make the appropriate distinctions necessary to provide user assistance for an increasing variety of scenarios and use cases, to be delivered via an expanding range of technologies?

Information 4.0 and technical communication

“Industry 4.0” labels the current transformation of manufacturing processes. In Industry 4.0, several technologies have matured to the point of having a profound impact on these processes. Industry 4.0 is a world of ubiquitous sensors; observing, reporting, and correcting problems as they occur, and the pervasive application of Artificial Intelligence.

These devices will presumably require associated content... not locked in a PDF, but associated with each device, its users, use cases, contexts, and possible actions. Our profession is prepared for this transition, as the technical communication practices of information typing, structured content, metadata, and device-independence enable and support delivery of context-appropriate content to humans, and perhaps... to machines.

Our profession has responded by developing appropriate practices and technologies to support these new content requirements. “Information 4.0” labels a set of content characteristics and practices that align with the Industry 4.0 world. According to the Information 4.0 Consortium, characteristics of Information 4.0 content include:

- Molecular – no documents, just information molecules
- Dynamic – continuously updated
- Offered rather than delivered
- Ubiquitous, online, searchable and findable
- Spontaneous – triggered by contexts
- Profiled automatically

And how can we deliver content in a standard package, shareable across devices from different manufacturers, machine-readable, with accompanying standardized metadata? The International Standard for Intelligent Information

Request and Delivery, or iIRDS, is the work product of a tekcom-led consortium, and was formed specifically to address this requirement.

Information 4.0 expresses documentation practices for a world of intelligent systems, along with billions of connected devices, including sensors that report and may inform action, and ubiquitous display devices. Information 4.0 promises a new age for technical communication. Our users will seek answers based on myriad new factors, including environment and context. And these billions of connected devices are not just content subjects, but are potential content consumers. Information 4.0 demands new authoring and content management approaches and practices. But desktop publishing-based workflows remain entrenched and ubiquitous. Monolithic file formats like PDF remain popular. Is there a place for legacy and new practices in our profession?

Chatbots and voice interfaces: new ways to deliver content

At tcworld conference 2018, the Information Energy track featured talks about the future of technical communication, particularly in the context of Industry 4.0 and Information 4.0. These sessions focused on new ways to provide information to users, particularly chatbots and context-specific, just-in-time content. Speakers discussed both new mechanisms made possible by technology and real-world challenges in deploying new ways to provide information to users, helping them to make appropriate decisions and take appropriate actions.

Chatbot developers are finding that a chatbot is much more than an information delivery mechanism. Users don't want chatbots to deliver information. Users want chatbots to solve their problems. Users expect chatbots to operate seamlessly with your organization's IT infrastructure. Imagine a user having difficulty registering for your product or service. Does your chatbot user interface

- a) take the user to the appropriate page,
- b) fill in the appropriate page with information that is known about the user, or
- c) guide the user through any fields that may be problematic?

There's much to learn about writing for these new devices, scenarios, and use cases. Discovery of services is a challenge for voice-only interfaces,

as there is no visual menu (for audio-only devices) of available applications or commands. Technical communication prognosticator Scott Abel notes that voice applications and chatbots will likely demand new writing styles, especially as users interact more comfortably and conversationally with voice applications: “We're going to have to start teaching people how to write conversational content, which is totally different than writing in a narrative or third-person. It's actually quite challenging.”

One can envision two writing styles for the same information – one style for screen interfaces, and one style for voice applications and chatbots.

Will long-form technical communication disappear?

Although technical communicators will increasingly architect molecular content to accompany IoT devices and drive chatbots and voice applications, demand for conventional user assistance will likely remain strong. Current use cases for user assistance are unlikely to disappear. Imagine a user of a complex software application. The user will likely benefit from context-dependent, task-oriented support content. However, if the user's goal is to master the application, the user will benefit from – or even require – information about all user-facing aspects of the application. Likewise, a developer attempting to learn and use an API will need an appropriate mix of overview, tutorial, and reference content. Presentation of an information architecture, whether in the form of a table of contents or an organized, grouped set of topics, will be an invaluable aid to the user's goal.

Will everything change?

But will all of our technical communication practices change? Will all of us write in micro-content-sized chunks intended to accompany IoT devices and power chatbots, voice applications, and just-in-time content delivery? Past experience indicates otherwise. Other forms of

technical content will likely remain popular as well as necessary.

Consider the bane of technical publishing workflows... the desktop publishing application. But desktop publishing is appropriate in many circumstances. To present a sweeping generalization, in desktop publishing, it's easy to create a single document or a small collection of documents. However, desktop publishing applications are woefully inadequate and inappropriate for creating an organization's strategic content infrastructure. As technical communicators, we advocate the proper tools in the proper circumstances.

Also consider what may be the opposite of microcontent, the long-form PDF document. Many have predicted the demise of the PDF file format. Yet, PDF remains widely popular, the second-most popular file format for content on the web behind HTML. Despite issues with findability and readability on small-screen devices, organizations still demand PDF.

I can't help but notice that many of the vendors' marketing documents I encounter about structured authoring, metadata, and intelligent content are published in... PDF. A look at the PDF metadata indicates that most are published with conventional desktop publishing applications. Clearly, PDF remains a popular format in many workflows, particularly for high-value marketing content with design requirements to reflect an organization's identity and branding.

Writing for machines

One key motivation for the Information 4.0 approach and practices is the idea that machines, as well as humans, will be consumers of content. Some in our profession have spoken of this idea, and there's evidence that people outside the technical communication profession have taken note of this outcome. A recent report of technology trends states:

"If you are an airline mechanic and you're trying to troubleshoot a tricky engine problem without further delaying a flight, it would be easier if you had a computer read all of the technical documentation for you and suggest likely fixes. Or, better yet, let the machines figure out what's wrong on their own, by making all technical manuals and documentation available to them for reading and analysis."

2018 Tech Trends Report, Future Today Institute

As improvements in natural-language processing and Artificial Intelligence converge to make machine consumption of content a reality, our profession is ready. This capability depends on core technical communication practices, including structured authoring, microcontent, XML, and rich metadata.

Things rarely disappear

Use cases, user requirements, and users vary widely. Technologies including the Internet of Things, chatbots, voice applications, Artificial Intelligence, machine learning, and natural language processing are all driving new use cases for content and new capabilities for supporting our users. And they motivate very particular approaches, technologies, and tools for content workflows. But I'm reminded of the wisdom of New York Times columnist David Pogue – "Things don't replace things; they just splinter." Digital audio is ubiquitous, but audiophiles still seek (and purchase, in substantial quantities) vinyl records. Print newspaper circulation has decreased, but millions still read a daily print newspaper. Just as the paperless office has proven elusive, unstructured workflows and PDF publishing will remain. And millions of knowledge workers (and many technical writers) will continue to author unstructured long-form documents using conventional desktop publishing applications.

The Industry 4.0 world will certainly provide new opportunities to change the way we deliver information, and even **demand** change. But this will be yet another workflow – yet another approach, for particular applications and use cases that require it. And whatever the approach, technical communicators will bring to bear both legacy core skills and new skills and technologies.

The unknown future

It may be easy to forget that the smartphone is just over ten years old. These devices have certainly revolutionized our ability to provide information about our products and services, seamlessly and context-free. Yet some futurists have identified 2018 as the beginning of the decline of the smartphone. What will replace it? Perhaps in ten years we will all be wearing Augmented Reality headsets.

In ten years, what will we look back on and say "we used to do that"? Software used to come with a printed manual. It no longer does, in part because

of the realities of economics (expense of printing and distribution) and in part because of new ways to provide information (online). Surely, we will eventually discard some of today's practices and methods. Which ones, we don't know yet.

References and resources

- 2018 Tech Trends Report, Future Today Institute, <https://futuretodayinstitute.com>
- Globally Speaking podcast, January 2, 2019, www.globallyspeakingradio.com/podcast/episode-70-wrangling-your-global-content
- iiRDS Consortium, <https://iirds.org>
- Information 4.0 Consortium, <https://information4zero.org>
- *The Lessons of 10 Years of Talking Tech* by David Pogue, New York Times, November 24, 2010. www.nytimes.com/2010/11/25/technology/personaltech/25pogue.html

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Smart and smarter: Overcoming limitations of rule-based chatbots

Chatbots have come a long way since the first one was introduced in 1966. However, to become a truly helpful user support channel, they still have a long road ahead of them. Knowledge maps, user context and structured content can help make a difference.

Text by Alex Masycheff



The first chatbot

The first chatbot was built by Joseph Weizenbaum, an American computer scientist from the Massachusetts Institute of Technology, in 1966. The bot was called Eliza, in reference to Eliza Doolittle of Bernard Shaw's *Pygmalion*. To make Eliza understand the user's questions and give answers, the bot used a script that consisted of pattern-answer pairs. If a user's question matched one of the pre-defined patterns, Eliza would respond with the matching answer. One of the most famous scripts was called Doctor. It emulated a conversation with a psychotherapist. Ironically, while Weizenbaum wanted to show the superficial nature of interaction between computers and humans, quite a few people believed they were talking to a human when chatting with Eliza. Weizenbaum's own secretary asked him to go out of the room when she was talking to Eliza, saying that she was having a private conversation! Here's a famous example of a conversation with Eliza:

Human: Men are all alike.
Eliza: In what way?
Human: They're always bugging us about something or other.
Eliza: Can you think of a specific example?
Human: Well, my boyfriend made me come here.
Eliza: Your boyfriend made you come here?
Human: He says I'm depressed much of the time.
Eliza: I am sorry to hear that you are depressed.
Human: It's true. I am unhappy.
Eliza: Do you think coming here will help you not to be unhappy?
Human: I need some help, that much seems certain.

Eliza: What would it mean to you if you got some help?
Human: Perhaps I could learn to get along with my mother.
Eliza: Tell me more about your family.

At first sight, this conversation looks quite natural. However, if you take a closer look, you'll notice that all Eliza did was repeat the user's words and respond to them with a very limited set of phrases. This means that if a user's question didn't match any of the pre-defined patterns, Eliza wouldn't be able to answer. This made Eliza unable to scale because it would be virtually impossible to pre-define all possible questions and responses that the user might potentially provide.

Why a rule-based approach is not scalable

Most of the chatbots that exist today are still based on the same approach. Of course, they are much more flexible, but they still require question-answer pairs to be defined explicitly. To make the situation even more complicated, think about the many ways to ask the same thing. For example, here are just a few variations (also known as utterances) of the question "How to print a document":

- What should I do to print a document?
- What does it take to print a document?
- How can I print out a file?
- What's the procedure for printing?
- I need to print a document. What steps should I take?

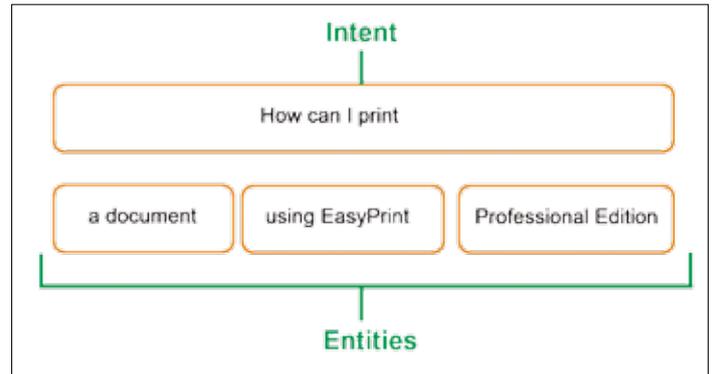


Figure 1: Intent and entities

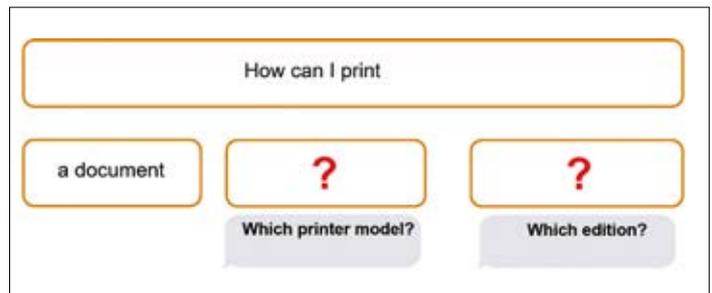


Figure 2: Some entities are not provided

You can probably come up with a dozen variations of one single question. Now think about how many other issues are usually covered in product documentation, and you'll realize the amount of effort required to identify not only the issues themselves, but also all possible utterances. On top of this, there is a good chance that there are multiple products or different flavors of the same product, and the printing procedure is different for each of them. First, this means that question-answer pairs have to have multiple branches depending on the printer model or flavor. Second, to make the chatbot give a relevant answer, you have to somehow identify which information is missing in the user's request. For example, if the user asked "How can I print a document?" and the printing procedure is different for

different models of the printer or for different types of documents, the chatbot should be able to ask what model or document the user is working with. Identifying intents and entities is how this challenge is now solved. The "intent" is the goal that the user wants to achieve (see Figure 1). The "entity" is a parameter of the goal. In our example, the intent is to print a document. The entity is a document (the printing procedure of an image might be different). A separate entity might represent the printer's flavor, model, or edition. If any of the required entities is not provided in the user's request, the chatbot has to ask the user about the value for this entity (see Figure 2). When the amount of content is not big, and the complexity of variations is not significant, all possible intents and entities for each intent can probably be manually defined.

Otherwise, maintaining such a chatbot will require too much effort. An additional problem is how to provide the user with comprehensive and useful information, even if the user didn't explicitly ask for this information. A challenge of the information age is that we don't know what we don't know. The user doesn't necessarily know which question should be asked to achieve a goal. Therefore, if the user doesn't ask a question explicitly, the chatbot won't give an answer, although the information could be important and helpful for the user. Below, you will find a solution that consists of three components:

- Knowledge map
- User's context
- Structured content

Knowledge map

A knowledge map describes the subjects of the domain and relationships between them.

Suppose a company produces three models of a printer: Basic, Pro, and All-In-One. The following is known about these printers:

- Basic and Pro are ink-jet printers.
- All-In-One is a laser printer.

- Basic and Pro are connected to the computer via a regular cable. All-In-One has both a cable and WiFi connectivity.
- The following issues might occur on all printers regardless of the model: the printer doesn't print, there is a paper jam, and the print is too light.
- If the printer doesn't print, it might be related to connectivity problems (for example, the cable is not plugged in or the Wi-Fi connection is lost).
- If the print is light, the cartridge has to be replaced, and we want to give the user the option of ordering a new cartridge right away.
- Troubleshooting procedures are different for different models, so information about the user's model is required to provide the user with the relevant troubleshooting procedure.

Figure 3 shows how a knowledge map for this domain can be constructed.

As you can see, the knowledge map defines the types, model, and connectivity options as well as possible issues that might occur. It also shows

how each of these options relate to each other.

The knowledge map can be used to automatically generate questions about information missing in the user's request and to navigate the user through options.

Let's suppose the user typed: "My printer doesn't print." After locating this issue in the knowledge map, the chatbot crawls through the relationships that this issue has.

The chatbot identifies that this issue is related to all three models (see Figure 3). To disambiguate this situation, the chatbot can prompt the user to choose the model from the list of models defined in the knowledge map. Furthermore, if the user responded that the model is All-In-One, by navigating through the knowledge map, the chatbot can now find that the issue might be caused by connectivity, and All-In-One has both cable and Wi-Fi connectivity. Because the troubleshooting procedure for Wi-Fi and cable connectivity is different, the chatbot again needs to disambiguate the situation by asking which connectivity option defined in the knowledge map the user is using.

In this example, the chatbot generated questions automatically based on the structure of the knowledge map rather than on manually defined entities specified for each question.

Let's consider another situation – the user saying: "My ink-jet printer doesn't print". Based on the structure of the knowledge map (see Figure 3), the chatbot can identify that there are two ink-jet models: Basic and Pro. To disambiguate, the chatbot should prompt the user to choose from these two options without even suggesting All-In-One, because that printer uses laser.

The knowledge map can also be used to provide the user with relevant information even if the

user didn't explicitly request this information. Suppose that the print is too light. It might be an indication of low ink in the cartridge, so it would make sense to offer the user the opportunity to order a new one. This can be done by defining in the knowledge map a relationship between the issue and cartridge ordering information.

Tools for building knowledge maps

Knowledge maps can be represented as ontologies in a knowledge representation format, such as Web Ontology Language (OWL) or Resource Description Framework (RDF). Because an XML presentation exists for both formats, this makes knowledge maps processable by machines.

There are various ways (and their combinations) to build a knowledge map:

- Manually, using ontology editors, such as Protégé (open source) or Fluent Editor (free for individual developers, open source projects, and academic research), or ontology APIs, such as Jena Ontology API or OWL API
- Automatically, using natural language processing and Artificial Intelligence engines
- By reusing existing ontologies

User's context

The information gathered about the goal the user wants to achieve, along with the goal's parameters (such as product model or connectivity type), is known as the user's context. The user's context includes various elements that may come in all kinds of variations.

For example, the user may experience problems with printing while using the All-In-One model connected to the computer via Wi-Fi.

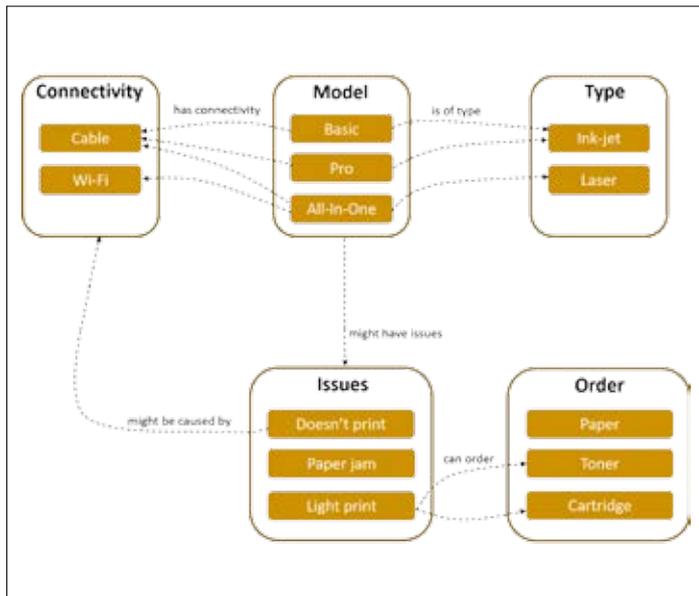


Figure 3: Knowledge map describing printers



Model	Basic	Pro	All-In-One
Connectivity	Cable	Wi-Fi	
Issue	Doesn't print	Paper jam	Light print

Model	Basic	Pro	All-In-One
Connectivity	Cable	Wi-Fi	
Issue	Doesn't print	Paper jam	Light print

Model	Basic	Pro	All-In-One
Connectivity	Cable	Wi-Fi	
Issue	Doesn't print	Paper jam	Light print

Figure 4: Different combinations of the user's context elements

Or the user's All-In-One printer may fail to print while being connected via a regular cable. Or the user may get paper jammed with the Pro model.

Figure 4 demonstrates different combinations of the user's context elements.

Structured content

As you can now see, the user's context is granular.

To find the content that precisely addresses the given combination of the user's context elements, this content itself has to be granular too. In addition, each content granule has to be semantically marked up to indicate the model, connectivity type, and issue it describes.

This markup comes from the knowledge map. Semantic markup also makes content processable by machines. This is what structured content is all about (see Figure 5). Because subjects in the knowledge map are linked to each other, by associating pieces of content with subjects in the knowledge map, we also connect these pieces to each other. This capability opens rich opportunities for navigating the user through the relevant content.

Conclusion

Rule-based chatbots are relatively easy and cheap to implement, but they can cover only the following simple scenarios:

- The amount of content is not big, and it's not growing, and thus doesn't require much maintenance.
- The amount of content variations and their level of complexity is not significant.
- The scope of the domain is narrow.

Otherwise, both the initial configuration and ongoing maintenance of the chatbot will become very expensive and error-prone. Building a chatbot for complex scenarios requires building an information architecture to organize both content and knowledge. A combination of knowledge maps, user's context, and structured content can be a foundation for such architecture.

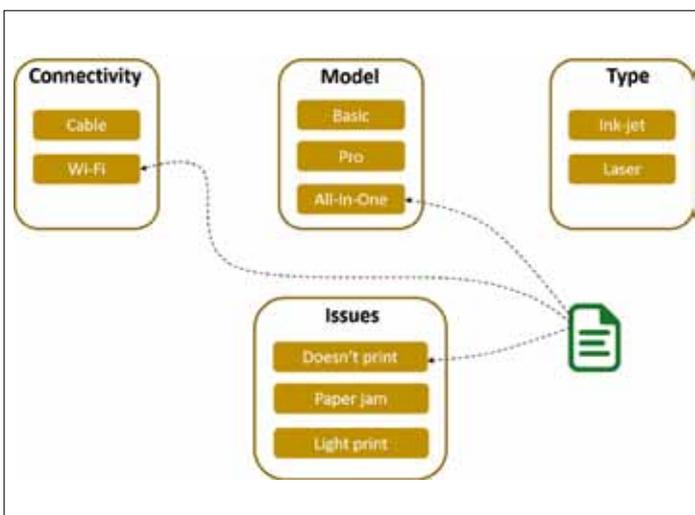


Figure 5: Content describing the issue when the All-In-One model with Wi-Fi connectivity doesn't print

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Wikidata at work

Wikidata is a large-scale, non-profit knowledge base that anyone can edit and use. Applications that are intuitive to use and powerful interfaces for programmers make it a versatile tool for a large variety of usage scenarios – including knowledge discovery, content enrichment, terminology work, and translation.

Text by Christian Lieske and Dr. Felix Sasaki



Wikidata is an environment for collaborative work in the field of data and information. Built on the ideas of Linked Data/the Semantic Web [1], it currently provides information on more than 50 million items. Hosted by the Wikimedia Foundation, Wikidata provides an open source for modern content creation. In this article, we look at how content creators can use Wikidata, the “magic” behind it, and the Wikidata tooling. Furthermore, the article touches on some loose ends and calls to action. The goal is to stimulate an open discussion on content creation processes as exemplified by Wikidata.

How Wikidata can help

We live in a world of constant change, and for many of us there is a need for lifelong learning. Learning often means exploring parts of the world that we have not really seen before. For example, let’s say that you want to explore the world of Machine Learning (ML) and Artificial Intelligence (AI). To get a basic understanding, you might look at the disciplines or sub-fields related to ML and AI. An ontological view like the one in Figure 1 - generated by a so-called Wikidata query [2] - could help.

Naming things in different languages

If English is not your native language, you might prefer translations for the English terms used in the ontology. Figure 2 shows a bilingual list in English and German that you can generate by running another query on Wikidata [3].

independent component analysis	Unabhängigkeitsanalyse
offline learning	Offlinelernen
online machine learning	Onlinelearning
pattern recognition	Mustererkennung
reinforcement learning	Bestärkendes Lernen
statistical classification	Klassifikationsverfahren
supervised learning	Überwachtes Lernen

Figure 2: Bilingual list of terms for the domain “Machine Learning/Artificial Intelligence”

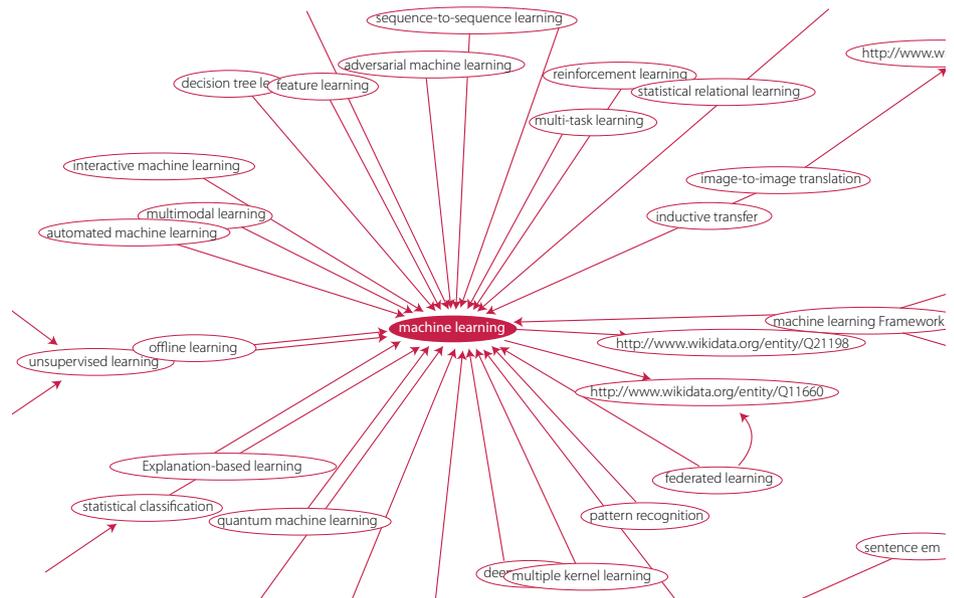


Figure 1: Restricted ontological view of the domain “Machine Learning/Artificial Intelligence”

Figure 3: Spreadsheet with facts and relationships for “Stuttgart”

Digging deeper

In addition, Wikidata also allows you to dig deeper. Let’s suppose you would like to know more about Stuttgart, the venue of the tekomp fair and tcworld conference. By running a query on Wikidata, you could generate a file like the one in Figure 3.

Blend and enrich

Wikidata also offers the option to combine information from different sources. The map in Figure 4 was created by blending different types of geographical data. [4]

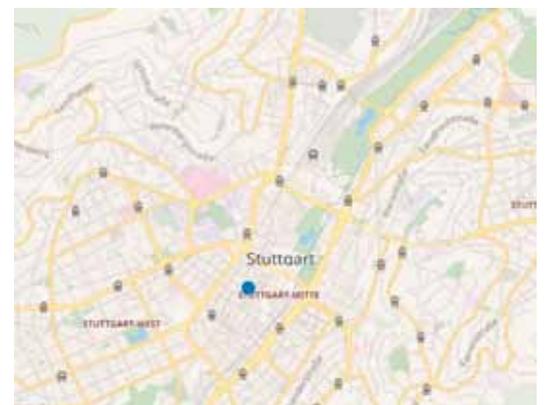


Figure 4: Location of certain Automated Teller Machines (ATMs) in Stuttgart

The magic behind Wikidata

Just like Wikipedia, Wikidata can be consumed (read) or modified (written) by anyone. Key differences from Wikipedia are:

- Wikidata stores information in a structured manner, while information in Wikipedia is stored largely unstructured – the semi-structured info boxes are the exception.
- There is only one Wikidata instance, while there are approximately 300 single-language Wikipedia instances.

Structure is not added to information via tables, lists or specific markup. Instead, it emerges from

what is called the Wikidata data model. This model defines what can be stored and how it is stored.

The central elements of the Wikidata data model are called items. They represent concrete or abstract entities. Items can be attributed using statements. Statements are composed of properties and their values, which may refer to other items. Statements can be qualified and documented by references, as shown in Figure 5.

For the representation of items, statements, etc., Wikidata has adopted many approaches known from Linked Data/the Semantic Web. To capture information, Wikidata specifically uses “Subject-Predicate-Object” arrangements:

Q1022, P361, Q8172
 Q1022, P361, Q451619
 Stuttgart, part of, Stuttgart Government Region
 Stuttgart, part of, Stuttgart Metropolitan Region

Furthermore, Wikidata distinguishes between items/concepts (language-agnostic), and labels/terms (language-specific). This subject-predicate-object data model is closely related to the idea of graphs – collections of nodes and edges/circles and lines (see Figure 6). Another attractive feature of Wikidata is that it not only allows you to work with text, but also with pictures and sounds.

Technology and tools

The main components of the Wikidata infrastructure are a database management system (WikiBase) and a wiki component (MediaWiki). Both are open source, and you can set up your own Wikidata system (e.g. behind a firewall). Programming interfaces supporting JavaScript Object Notation (JSON) and the Resource Description Framework (RDF) with its query language SPARQL, help to make Wikidata as versatile as possible. This enables the creation of JavaScript libraries such as Qlabel [5] and the following end-user tools:

- Reasonator
- Ask Wikidata
- Wikidata Translate (including disambiguation)

As items may include ontological information, taxonomies and other knowledge organization tools can be generated. [6] “Wikipedia and Wikidata tools” demonstrates how to gather translations, synonyms, category information, links to media assets, and much more. [7]

Implementations such as “Wikidata-Taxonomy” allow useful yet limited usage scenarios related to Wikidata. The full power of Wikidata is accessible via SPARQL, the standard for programs related to linked data/the Semantic Web. The Wikidata example queries demonstrate this and illustrate how to work in domains such as medicine, computer science, history or sports. [8] An interesting feature of the SPARQL query interface to Wikidata are the different options for visualizing results, including tables, diagrams, timelines etc.

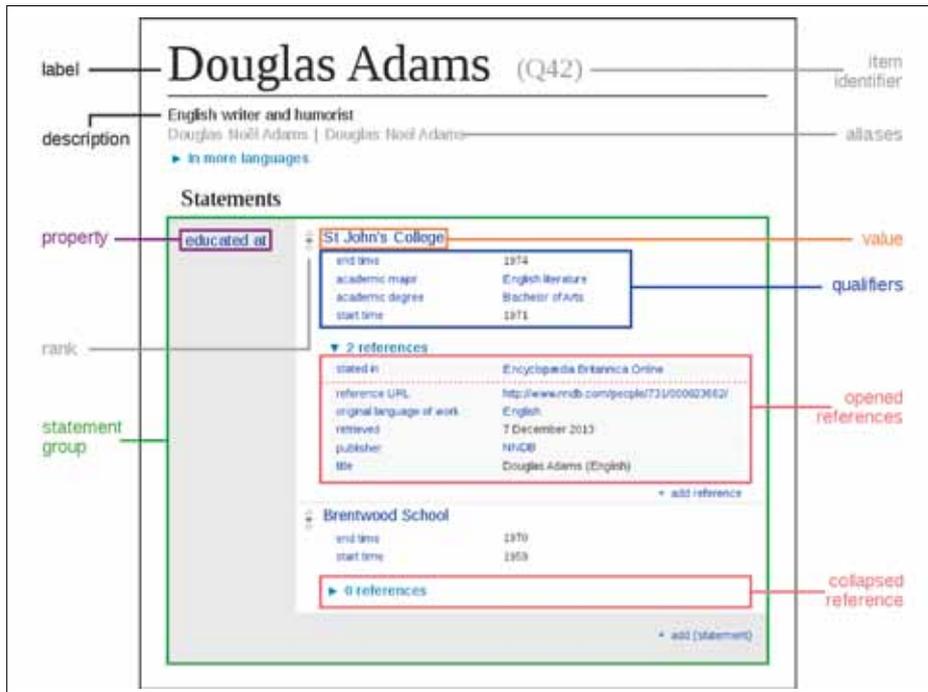


Figure 5: A high-level view on the Wikidata data model

Source: www.mediawiki.org/wiki/Wikibase/DataModel/Primer

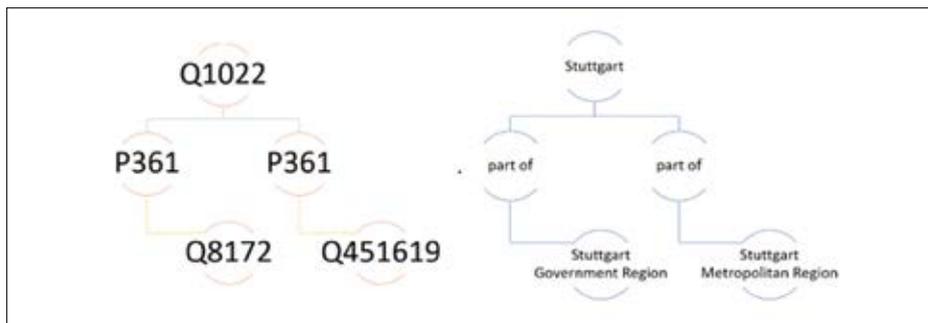


Figure 6: Subject-Predicate-Object arrangement in graphs (left: language-agnostic abstract identifiers, right: language-specific human-readable labels) Source: www.mediawiki.org/wiki/Wikibase/DataModel/Primer



Content

Wikidata relies heavily on its content. Two forces are at play here:

1. The coverage as such
2. The interconnection between data sets

All content is created and maintained by humans or machines (bots). Guiding principles are:

- Information shall meet the criteria for notability as specified by Wikidata
- Information can be contradictory

All content in Wikidata can be used according to the Creative Commons CC0 license.

As an alternative to storing content in Wikidata itself, it is possible to establish connections from Wikidata content to other data sets. The most important step in this process is to “match” data items in both Wikidata and the other data set. The matching not only allows an import, but also enables automatic content enrichment. For example: Wikidata contains identifiers of the “Gemeinsame Normdatei (GND)”, and links them to Wikipedia. The GND identifier for an author can thus be linked to his biography in Wikipedia.

Loose ends and calls to action

Caveats

Like most large collections of information, Wikidata is not perfect regarding general coverage, completeness of information for certain domains and items, or correctness and accuracy. A case in point is the domain of terminology.

Wikidata has a relation to terminological data categories as defined by ISO 12620 and ISOcat or its successor DatCatInfo.

Currently, however, data categories related to terminology are hardly used. A Wikidata query on the use of terminological data categories yields only 462 hits, most of them relating to linguistics and literary studies. Other domains are hardly represented at all.

Loose ends

Initially, Wikidata scored low with regard to lexicographic information – the world of lexemes, senses, variety, etc. “Terminology” was lacking as well: The data model only allowed preferred terms/names to be used effectively in Wikidata. Synonyms, abbreviations, unauthorized names, etc., could only be categorized as “also known as”. They also seemed to be unsupported by Wikidata’s search.

An extension that was put in place recently [9], addressed this issue and should help to improve the usability of Wikidata in lexicographic contexts. The aim, among other things, is to be able to deal more comprehensively with data categories in the areas of etymology. It is assumed that this in turn will yield benefits for Wiktionary – the “lexicon” of the Wikimedia ecosystem.

The previous two sections touched on areas where interested constituencies and individuals could become active to improve Wikidata. Here are some specific ideas:

- Examine possible shortcomings in the data model.
- Systematically integrate data categories relevant to a certain domain into Wikidata or adapt existing Wikidata data categories to the needs of that domain.
- Systemize the mapping between Wikidata properties and domain-specific data categories.
- Explain the added value of mapping for a certain domain (e.g. access to multimedia assets).
- Make the added value of the mapping clear for Wikidata (e.g. make variants of terms such as unauthorized writing attributable in Wikidata).

We hope that this article can inspire other content creators to explore Wikidata and become active participants in improving this useful knowledge base.

References

- [1] Lieske, C. and F. Sasaki, F. (2017). *Linked Data and Schema.org: Crossing the language chasm with terminological assets*. www.tcworld.info/e-magazine/content-strategies/article/linked-data-and-schemaorg-crossing-the-language-chasm-with-terminological-assets/
- [2] <http://tinyurl.com/y8bndulh>
- [3] <http://tinyurl.com/y87x858n>
- [4] <http://tinyurl.com/ycmsw5yn>
- [5] <http://googleknowledge.github.io/qlabel/demo/football>
- [6] see “Wikidata-Taxonomy” at www.npmjs.com/package/wikidata-taxonomy
- [7] <http://arxiv.org/pdf/1602.02506v1>
- [8] www.wikidata.org/wiki/Wikidata:SPARQL_query_service/queries/examples
- [9] www.wikidata.org/wiki/Wikidata_talk:Lexicographical_data#Query_Lexemes_in_the_Query_Service

Further reading

- Neubert, J. (2017). *Wikidata as a linking hub for knowledge organization systems?* In: Mayr, Philipp et al. (Ed.): Proceedings of the NKOS Workshop at the TPD 2017 conference, RWTH Aachen, <http://nbn-resolving.de/urn:nbn:de:0074-1937-1>
- Lacroix, L. L. Pintscher, D. Kinzler und D. Vrandečić (2017). *Wikidata for Wiktionary*. https://commons.wikimedia.org/wiki/File:Wikidata_for_Wiktionary_announcement.pdf
- Voss, J. (2016). *Classification of Knowledge Organization Systems with Wikidata*. In: Proceedings of the 15th European Networked Knowledge Organization Systems Workshop (NKOS 2016), <http://ceur-ws.org/Vol-1676/paper2.pdf>

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Do you need a content delivery solution?

Two sides need to be considered carefully before implementing a content delivery solution: What content publishers need and what end users expect from a system. Here is a checklist of requirements that can help companies decide what's initially important and how the solution might evolve over time.

Text by Joe Girling



Image: © yoh4nn/istockphoto.com

In my experience, successful content delivery solutions evolve over time, with changing business needs and user feedback being the key drivers of the evolution. At the start of a project, you may have an initial expectation of functionality for your content delivery solution and use MoSCoW or a similar technique to prioritize, perhaps arriving at a minimum viable solution and some future releases. This evolution means it is very important to choose a platform for your content delivery solution that is both extensible and open.

Here is a list of typical functional areas to be considered when planning a content delivery solution:

- Content
- Accessing content
- Delivery platform
- Personalization/interaction
- Integration
- Reporting and analytics
- Business and support
- IT

In this article I will only focus on Content and Accessing content.

Content

Content can be broken down into two areas: Sources of content and publishing content.

Sources of content need to be identified. Many formats might need to go into a content delivery solution, each with its own requirements and each not necessarily as straightforward as you would expect. For most of us, XML/DITA, PDF, Word, Markdown, content from existing WIKI, HTML, developer documentation, etc. will be likely sources.

Is your content current or legacy content? If there is legacy content, can you simply link to it and focus on the current content? This would apply, for example, to old web help outputs that still need to be available.

Next, establish where the sources of content are stored and who owns them. You may need to engage with other teams to establish responsibilities and the right processes to access the content. Do you need to migrate content sources from one format to another? If migration is required, is it a one-off process (e.g. for legacy content) or a repeat process needed each time content is updated?

Finally, ask yourself: What is special about your content? What are you doing with your content

that is important to consider, and make allowance for once it is delivered? Consider, for example:

- If you are working with metadata, what is it used for? What will be the expected outcome in the delivery system? Metadata requirements vary significantly between different organizations.
- Are the specializations used in your content important in how content is delivered?
- Do you have media files such as 3D images, videos, or interactive SVGs?
- Do you plan to deliver API docs?

Publishing content. Having identified the types of content that will be used in a content delivery solution, consider how this content is uploaded, managed and updated.

A content management system (CMS) or Git repository might give you the option to publish directly to the delivery system. But what features of those systems do you use that might be important, and how should they be reflected in the published content? When creating content, you might be using these types of features: branch, snapshots, versioning, languages and metadata. Consideration needs to be given to how these features are reflected in the delivery solution. As well as using metadata within the source content itself, there may be CMS-level metadata that you want to make use of in delivery.

Ask yourself: When the content is published, are XML/DITA type formats automatically converted

to HTML and PDF? What degree of automation can be used? Some formats may need manual preparation and manual upload.

To create a dynamic solution, the content and metadata need to be indexed. This leads to the question of what needs to be indexed. It will probably be the full text, metadata in source content and, in many cases, also the CMS-level metadata. For example, some CMSs will use CMS-level metadata partly to facilitate searching within the CMS. Will you need to use this when delivering the content?

Updating is an important consideration, particularly when working with different versions of the same content. Find out how often content is updated. Also consider whether you just need to update a single version of a document and make it available to users, or if you need to publish multiple versions of the same content at the same time and allow users to select the appropriate version for themselves.

Image 1 shows a content delivery solution in which the user can select from multiple versions of a piece of content, where some of the older versions are legacy content in PDF format.

Finally, when publishing content, you will probably have a requirement to test updated content in the delivery solution before it's released. This means that you will need a space where you can experiment with new ideas without af-

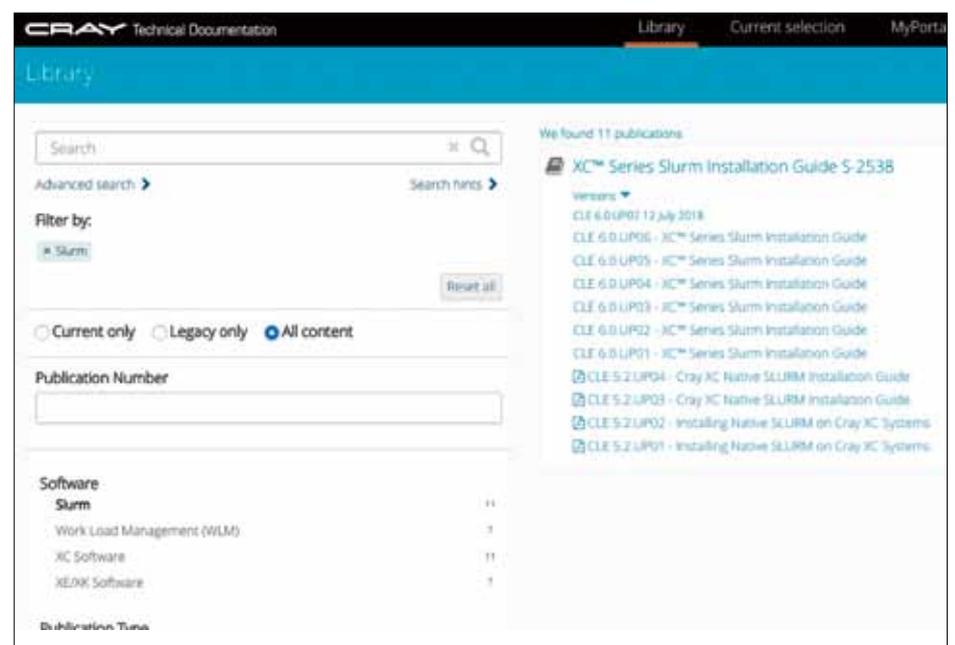


Image 1: Multiple versions of a piece of content: The newer versions in HTML, the older in PDF.

fecting the production of your content delivery solution. This means that, in addition to being able to publish to a production server, you may also need the ability to publish to staging and/or development servers. Typically, these servers need slightly different content. Staging content, for example, might come from a different branch in your CMS.

To give you an idea of how apparently simple publishing requirements can have hidden depths, let's take a look at a requirement I often see: The solution must support PDF. However, you need to consider many factors regarding PDF content:

- Does the PDF content need to be searchable and displayable in the browser?
- Is PDF just a download format for other structured content (hence there is no requirement for searchability)?
- When are the PDF files created? Manually in the CMS or automatically when content is published to the content delivery solution?
- How are PDF files linked to their source publication? Manually or automatically when they are created? How is metadata applied that links PDF files to source publications?
- Are legacy PDF files uploaded one by one or as a batch?
- Do PDF files download or open in the browser window?
- Do PDF files need to be watermarked in some way, for example, to indicate that they are an uncontrolled copy?
- If using personal collections, should a user be able to create PDF files from their collection?

In the example above, the older "legacy" versions of the content are in PDF format and are linked to the newer versions of the publication by metadata, which has been added to a library of legacy PDF files in a batch pipeline publishing process. This ensures the PDF files appear correctly when searched and displayed in the delivery solution.

Accessing content

Accessing content can be broken down into four areas: permissions, finding, viewing and interacting.

Permissions

Will your content delivery solution need to be public, private or both? Very often both are re-

quired. While delivery solutions themselves might only be public, there may still be a need for private content. This might include customer-specific content or test content that needs to be checked if it works correctly before it's released.

Public content may be different from the versions that are available to authenticated users. For example, content might contain information on restricted intellectual property that you wouldn't want to make publicly available, but those having agreed to your legal terms and conditions might be allowed to view it.

You also need to consider if there are groups of users defined in a User Authentication or Single Sign On application. You might need to check their information against an entitlement server to determine the content these users are entitled to access.

I also often see the need for different degrees of findability, where users might have different levels of access to content: full access to some and limited access to other content. Thus, a full text search will provide users with full access to some content, but only limited access to other content. Limited might mean that they can see that the content exists, but not be able to view it without appropriate permissions. Or, it might mean that they can view the content, but only see a small section of it – perhaps just the short description.

Finding

There are many ways in which users can find the content – it's not just about search! I've broken them down into five groups that would typically require implementing more sophisticated techniques:

1. Support portal

A support portal or content delivery solution will typically offer the ability to browse for content and provide full text search and faceted filtering. This is really what you might consider to be the minimum viable product for your content delivery solution. While browsing through groups of content requires some form of defined hierarchical structures, faceted filtering relies on metadata and perhaps some form of taxonomy for your content. Full text search alone does not require metadata or taxonomy. However, it can benefit from metadata, boosting results when keywords are matched with metadata or a taxonomy.

Defining a taxonomy doesn't need to be a complex and expensive task in its own right. In its sim-

plest version, it might cover the basics that you need: Product groupings and tasks.

2. Contextual help

A more contextual delivery of content might be required: embedded content, context-sensitive help, barcodes. This will typically require extra effort. Each of these options relates to an integration with products in some way. This might be sharing content resource IDs with software developers so that context-sensitive help/embedded help can retrieve the correct content. It may also require liaison with your manufacturing team to ensure barcodes are added onto your equipment so that they can be scanned to trigger content delivery.

3. Suggested, recommended or mandatory content

This type of content requires the delivery system to offer content that the user might need. But what is this based on? Suggested content might be based on reading content with comment metadata. Recommended content might be a more tailored list of content based on some other positive enforcement. Users may be required to read mandatory content before they can proceed. This refers, for example, to safety warnings and legal statements. Mandatory content may also need to be acknowledged by the user before more content is displayed.

From a requirements perspective, the system might need to index metadata that you are using in content and store information about content usage. Mandatory content also requires appropriate metadata to know that one piece of content relates to another.

4. Visual navigation

Visual navigation can be particularly useful for navigating large machines. Users can drill down through a series of images until they get to the content they might need. The main issue with visual navigation is deciding who is responsible for creating these images. For complex product applications, they may be automatically created from a CAD system. For more simple products, marketing often supplies the images.

5. AR and chatbots

Lastly, Augmented Reality and chatbots provide methods that are becoming more popular and typically require integration with third-party specialists to support implementation.

Viewing

While online viewing of content across devices (laptop, tablet, mobile) is straightforward to achieve through a responsive website, a requirement for offline viewing needs more consideration. A degree of offline function can be realized through a browser's ability to cache content. However, the standards for taking content offline using browser caching are deprecated, making this an unreliable technique. Another simple approach is to enable the user to generate and download a file of content to take offline (e.g. HTML, PDF, etc.). But this means that the content authors typically lose control of the content, in terms of changes and updates, once the user has an "uncontrolled copy" of the content downloaded. The most robust method for taking content offline is to use native apps. Native apps can be engineered for desktop and mobile devices, which enable content to be downloaded onto the device for offline use, while also allowing changes/updates to the content to be automatically incorporated as the device moves between offline and online.

Most content delivery solutions will need to create multiple links between content items. This is often more than simple cross references. For example, if you are looking at content for Version 3 of a product, cross-content links should take you to the equivalent version. If you switch to Version 2, then the same link should also go to Version 2 content. It is important to consider how you define these links in your source content and ensure that the delivery solution interprets them correctly.

Another important consideration is the level of customization/control of the look and feel of the content delivery solution. Do you require simple skinning/branding of a standard look and feel, control of style sheets or a fully custom look and feel? Perhaps you have an in-house development team that needs control over the look and feel of the solution.

There are multiple other considerations for viewing content. Although many considerations might seem to be minor details, they are important to consider in your requirements to ensure they can be implemented correctly in the delivery solution.

Interacting

There are common features of a content delivery solution that enable users to interact with the content. These include:

- Creating personal collections of frequently used content

- Annotating content (e.g. personal notes, providing feedback or rating content)
- Sharing content through different channels
- Creating new content within the delivery solution (e.g. FAQs, erratas, new articles, etc.)
- Acknowledging content (e.g. important safety notices/considerations)

Typically, public users can only view content, but logged-in users are able to further interact with the content.

Different types of users may need to interact with the content in different ways. A salesperson may need to assemble custom collections of content, then publish and share it. A field engineer or technician may need to pause steps of task-based content, perhaps video or simulations.

Interaction with the content often needs to be managed and tracked. New annotations and content created will need to be moderated. User acknowledgments of important content may need to be logged.

Letting it grow

In this article, I have covered some of the important considerations when implementing a content delivery solution. I would like to emphasize that most content delivery solutions evolve over time due to changing business priorities and user feedback. With that in mind, the most important consideration is to choose a platform for your content delivery solution that is both extensible and open.

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“Everybody sells” – it's not just a slogan anymore

A great opportunity awaits post-sales content professionals who choose to embrace the idea that “everybody sells.” With the value our content provides to customers, we can directly contribute to customer acquisition and retention.

Text by Andrea L. Ames



In July 2017, I left corporate employment and started a business. The most interesting and rewarding part of this process was putting many of my working principles to the test in a larger and more varied marketplace.

If you know me, read me, or have seen me speak during the past 15-20 years, you know that I believe that appropriate high-value, post-sales content fuels a business as much as – or perhaps more than – pre-sales content.

There is comparable opportunity for business to be gained or lost in either post-sales or pre-sales content.

I'm thrilled to say that this principle has held up – validated not only by my consulting and coaching engagements but also by my own business and my observation of entrepreneurial colleagues and friends.

How does this work?

Traditionally, pre-sales content was content created or curated and used primarily by marketing and sales departments to

- **generate potential sales leads** by gaining awareness in the marketplace for a company, its brand, and its product and service offers
- **inform a prospective customer, or prospect, to intelligently consider an offer's features and benefits**, and thus its fit for their needs versus other offers
- **support the sales team** as the prospect decides whether to purchase an offer

Post-sales content, on the other hand, was created and intended to be used by customers after they purchased the product to

- **Learn** how to use an offer – most commonly, a product
- **Do** the tasks that they need to accomplish with the product
- **Resolve** issues as they arise during the use of the product

For the most part, post-sales content has always been very product-focused, describing how the product functions. In the least helpful cases, that is all it describes. In more valuable content, product functions are described in the context of tasks that users recognize and deem important.

As it turns out, pre-sales content has been very product-focused as well. Many companies are now embracing content marketing, which has changed some of the direction and positioning of that content. In too many cases, however, this content continues to highlight the *product* as the center of attention.

Enter the digital business

Businesses are becoming more and more digital every day. During this transformation, they're taking their relationships with their customers along for the ride. Customers are now experiencing their interactions with companies primarily *through* content versus people – both before and after the sale.

In research that I conducted together with content strategy colleagues at IBM a few years ago, we confirmed that content plays a huge role in the digital business relationship and conversation with prospects and customers. [1] Across

the high-tech industry, more than 50 percent of viable sales leads were, at that time, generated through content, and more than 55 percent of the time that prospects spent in the sales cycle was spent interacting with content, compared with only 21 percent spent with sales professionals.

These numbers show an increase in the impact of content in the customer experience every year. In his workshop, "How to Create a Documented Content Marketing Strategy" at Content Marketing World 2018, Michael Brenner states, "The buyer journey has changed. Buyers now are completely in control." According to Brenner, 90 percent of the journey is "customer" and 10 percent is "sales rep." [2] The customers are interacting with content and driving their own journey.

This phenomenon extends beyond what we think of as traditional marketing content. Now "pre-sales" and "post-sales" are not accurate descriptions. Any content can be used anywhere and everywhere – regardless of its intended purpose. The lines are blurring more and more every year.

My IBM colleagues and I discovered that using technical content – what most would classify as "post-sales," at least with regard to its intended use – was the second most important *pre-sales* activity for technology buyers. [1] A sampling of IBM's web statistics and exit-survey data from a few years ago prove this point:

- More than 47 percent of ibm.com page views were technical content pages
- 44 percent of returning visitors to ibm.com were looking for technical content
- 32 percent of new visitors to ibm.com were looking for technical content

Content in the customer experience

As content becomes a bigger and bigger part of customer experiences, businesses with a content strategy that addresses *all* of the customer's content touchpoints are likely to create a neutral or even pleasant experience. More commonly, when companies have little or no strategy, or a siloed strategy, the customer experience is typically unpleasant.

While prospects and customers are blurring the lines between pre- and post-sales content *outside* of enterprise walls, inside we are slow to follow their lead. For the most part, we still create:

- "Pre-sales" content in "marketing" departments with the intent of "generating leads."
- "Documentation," in "documentation" departments with the intent of helping customers to "do."
- "Product training" in "education" departments to help customers "learn."
- "Support" content in "technical support" departments to help customers "resolve issues."

In our prospects' and customers' experience, this is just "content" – various touchpoints in the relationship and conversation with the company. In *our* reality, the silos are winning, and the effect on our audiences – whether they are prospects, customers, clients, or users – is deadening.

Transactions versus relationships

When we maintain our silos and perpetuate goals around internal-focused concepts like lead generation and explaining features and functions, we end up focused on customers as transactions. Prospects become aware of us; they consider us; they buy our products. At that point, marketing and sales are "done" with them. Now they are "users" – consuming products and information to "do" something. This transactional view means that the sale is the end of the road for a large portion of the team, perpetuating a lack of communication and collaboration across the organization from pre- to post-sales departments.

If instead, we view the customer as a relationship – one that requires care and nurturing before and after the sale – then we look at the content we provide to support that relationship in a different way. We ask how we are serving our customers, enabling them to achieve their business goals. Instead of asking whether we should provide help, for example, we ask what questions they need answered, and based on those questions and answers, we determine the best delivery method, timing, and placement of the resulting content. Instead of telling them what the product does, we help them understand their own business context better and show them how our product can be applied in that context to bring value.

In a relationship-based world, we care as much, or more, for our customer *after* the sale. We do it because it makes business sense. First, of course, the better you treat your customers, the happier they will be. When they are happy, they are more likely

to refer others to you, speak well of your company and products, serve as references and case studies, and provide testimonials.

A pretty well-known statistic in sales states that it costs five to ten times more to acquire a new customer than to retain an existing one. But did you also know that: [3]

- Increasing customer retention by five percent increases profits by 25-95 percent.
- The probability of selling to an existing customer is 60-70 percent, while the probability of selling to a new prospect is 5-20 percent.
- Existing customers are 50 percent more likely to try new products, and spend 31 percent more, versus new customers.

If we ignore the happiness factor, which is arguably hard to measure, these numbers speak volumes about the tangible business benefits of retaining customers. Why, then, do a mere 18 percent of companies focus on customer retention versus acquisition (44 percent)?

Leveraging the opportunity

Like everything that requires change, moving from an acquisition focus to a retention focus is challenging. But in every challenge lies opportunity! It's time for action. (Some would say it's past time.) Our mission, should we choose to accept it, is to leverage this opportunity.

With digital business creating customer relationships supported primarily by content, and the experience blurred across content intended specifically for pre- or post-sales uses, we have a unique opportunity to directly contribute to customer acquisition *and* retention!

The big question, of course, is what that leverage and contribution look like. Here are my top three strategies for leveraging this opportunity, starting with you, your content, and your team.

You: It starts here; step up and lead.

As they say when you take a trip with a commercial airline: "Put on your oxygen mask first, and then help others." Before you begin to list all of the reasons why you can't leverage this opportunity – due to your company, its culture, the company leadership, your executives and managers, your product team, your peers in other teams, your

marketing folks, and so on – stop and think about what, if anything, you have done to take some ownership for the problem in the context of your circle of control. [4] Then consider your circle of influence and your circle of concern.

To begin evaluating how much you are currently leading within your circle of control, ask yourself:

- Do I know everything I need to know about my audience (customer, client, or user; reader, viewer, or listener) and what they are trying to accomplish in their life or business – not just the tasks they need to accomplish with the product to achieve a successful functional outcome?
- If not, who can I ask for this information? Can I go out and get it myself?
- After I get the information, am I using it to ensure that all of the content I create is addressing accomplishment and success for my audience?
- If I'm told I must create content that I know is not right for my audience's needs, am I appropriately advocating for my audience to get the correct outcome in my content?

Your content: Provide value.

I wish this went without saying, but I've seen too much content as a content consumer, in my corporate role, and with my clients that is of little or no value. I've also seen what I call "utility" content, but frankly, not a lot of truly valuable content. As content creators, we need to "walk the talk," create the right content, measure its effectiveness, and be prepared to demonstrate in real, tangible terms the value of our content to those who are funding us.

To determine the value of the content you are creating, ask yourself:

- Is my content directly supporting my audience's goals – is it high-value content? In other words, am I focused on helping them achieve those goals even when the information they need is not directly related to my product? And when it is related to my product, is that content focused on helping my audience apply the product in their context to achieve the goal?
- Is my content supporting that high-value content? Is it the utility content that has medium value, because it is absolutely necessary (like installation or initial configuration) but is not *directly* enabling an audience goal?
- Is my content describing the product and how it functions? Is it low- or no-value content that describes user-interface controls and how to manipulate them, but not when or why you

should? Is my content redundant, such as guidance (for example, help or manuals) in addition to information that's already clear in the user interface?

- Do I have a way to measure the value, impact, and results of my content, both qualitatively and quantitatively? Am I obtaining some of that data directly from my audience?

Your team: Treat content like a business.

Clearly, you won't achieve your goals of customer results and delight by standing alone as the only content creator on your team delivering high-value content. And as a team, you have much more potential to make changes than you might think – just by operating like an effective business.

To determine whether you might be operating like a business, ask yourself and your team:

- Do we have the right organizational structure? Do I have the right people, with the right skills, in the right roles? Is my team reporting to the right part of the company?
- Do we have the right incentives in place: career path, rewards, evaluation methods?
- Do we have a way to measure the effectiveness of the team and our deliverables?
- Have we created a culture for delivering, growth, learning, and longevity?
- Do we have a vision and strategy for delivering products and services to our customers – both internal and external – that we are all aligned with?
- Do we have a clear plan with appropriate priorities that are aligned with our customers' needs?
- Are we efficient, leveraging documented processes and standards to deliver high-quality, consistent products and services?
- Do we have a financial model that ensures the right balance between investment, cost, and revenue?
- Do we have marketing and sales initiatives – aimed toward our internal customers – in place, and are they effective?
- Does everyone on the team understand our value proposition, marketing positioning, latest quarterly results and impact? If they met our CEO in the elevator after work and had a chance to stroll with her across the parking lot, would they be able to express some aspect of the team's value in that conversation – *not* activities, but *results*?

- Do we know who our key stakeholders are – above, below, and beside us? Do they trust us?
- Do we have a communication model that enables us to build and maintain relationships of trust with our stakeholders – both within our larger organization and across silos and teams?

Closing the loop

Let's revisit the key themes of customer retention versus customer acquisition.

First, everything your company does *after* the sale is an opportunity to deepen the customer relationship and increase customer lifetime value or a lost opportunity – creating confusion, mistrust frustration, and anger. Second, content is most of today's digital conversation and relationship with our audiences. Thus, everything you do has a direct impact on that conversation and relationship and the customer experience. The way that you show up in your role, the way that your team operates, and the value of your products and services will determine whether your impact is driving revenue, building relationships, and increasing customer lifetime value, or whether you are driving customers away, building frustration, confusion, and anger, and increasing mistrust.

We all know which side of that equation we want to be on, so what are you doing to get there?

Resources

- [1] Riley, Alyson, Andrea L. Ames, and Eileen Jones. "Telling the Right Story: Proving the Business Value of Content." *Intercom*, May 2013.
- [2] Brenner, Michael. "How to Create a Documented Content Marketing Strategy." Content Marketing World. Cleveland, OH USA. September 2018.
- [3] Saleh, Khalid. "Customer Acquisition Vs. Retention Costs – Statistics and Trends." Invesp blog: <http://bit.ly/2Q7F4Xi>
- [4] Covey, Stephen. *Seven Habits of Highly Effective People*.

ABOUT THE AUTHOR

Andrea L. Ames is a sought-after keynote speaker, workshop leader, author, consultant, and coach. Her company, Idyll Point™ Group, helps businesses make their customers successful by teaching content teams to operate like a business, developing content leaders, and providing customer-retention coaching for entrepreneurs. Andrea is an STC Fellow and past President, host of the After the Sale podcast, Executive Editor of STC's *Intercom* magazine, and Program Chair for UCSC's technical writing certificate.



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Agile Integration Model for global writing teams

Built on the high-tech industry, the World Economy 2.0 is all about our connected world, where virtual offices, remote teams, multi-time zone schedules, and telecons during Uber rides are the new normal. With it come new, subtle, and unavoidable occupational hazards of a global, offshored workforce.

Text by Akash Dubey



Image: © Rawpixel/istockphoto.com

It's anyone's guess whether the ongoing political rambling, tariffs, sanctions, protectionism, and the 250 US\$250 trillion world debt will ever be able to reverse or halt the globalization wave that has washed over almost the entire planet. Businesses can't stay competitive unless they tap the global talent and effectively utilize cost arbitrage. The following quote by Lee Kuan Yew attests this claim:

"If you deprive yourself of outsourcing and your competitors do not, you're putting yourself out of business."

Now, let's put the spotlight on technical writers. Depending on which part of the offshoring equation they belong to, they can also be subjected to the occupational hazards of a global economy. It's hard to be a technical writer:

- You are often dependent on Subject Matter Experts (SMEs) for information.
- Not all product team members appreciate your contribution.
- Your check-ins don't qualify for a new build spin (resulting in outdated integrated help for last-minute changes).
- Your cartoon character "Tina, the tech writer" doesn't even get enough airtime in cartoon strips of popular newspapers.

It's even harder if you are a technical writer in a multinational company with customers, R&D, product management, and technical support teams located in a different geography.

- Your information sources are limited.
- You have little visibility into customer use cases and pain points.
- You aren't part of some of the crucial product meetings and vital hallway conversations.
- Your relationship with SMEs is very transactional and doesn't translate into any informal help that team members sometimes offer.
- Your work-life balance is almost nonexistent because your commute is long and stressful, and your evenings are punctuated by stand-up meetings with global stakeholders.

If this article is still within the ambit of your attention span, I surmise that you could relate to some or most of the trials and tribulations of your brethren. Now that I have dispensed enough gloom all around, the stage is all set to disclose the silver lining (no, I haven't worked as an insurance sales agent). It's time to introduce the Agile Integration Model (AIM).

What is AIM?

The Agile Integration Model (AIM) provides a framework for technical writers who work in agile teams. It's particularly focused on alleviating the pain faced by remote technical writers.

Current scenario (or problems)

The following problems may not be true for all writers, but a large percentage of teams grapple with these challenges.

Challenge 1

The development team identifies the tasks for a sprint in the sprint kickoff/planning meeting. These meetings are long and fairly technical, as developers tend to dive deeper into the feature requirements and technical implementation so that they can arrive at story points for each task. As writers do not find the discussions relevant, a lot of them act as mere spectators or do not attend these meetings, especially if they are remote or in a different time zone.

Essentially, the development team doesn't see any active engagement from the writer(s).

Challenge 2

When the sprint begins, technical writers normally rely on UX wireframes (if available) to understand product features and get started with their initial drafts. They are unable to view the features or seek clarifications from the development team members because the features are under development during the first few days of the sprint.

Essentially, the writer is working in isolation and is out of sight for the development team. The absence is even more pronounced if writers live and work in remote locations.

Challenge 3

When the sprint is over, the development team provides a demo of all the features completed in that sprint. Writers do participate in these meetings but don't share any demos. In many cases, writers are unable to develop documentation for all the features completed in that sprint because some of the features are completed at the end of the sprint.

Essentially, writers are unable to actively participate in the sprint demo meetings.

These problems create a perception that writers aren't engaged, do not have technical expertise to explore the product, and/or have little knowledge of product features.

AIM to the rescue

The root cause of the problems discussed earlier is the engagement or integration process employed by the writer (or the writing team).

In my experience, half the battle is won if you show up in all key meetings. All stakeholders need to see you as an integral part of the team, as an engaged member, as a contributor. The remote writer will have to work harder on this, as he or she is not visible to the team in the same office.

In addition, try the following AIM guidelines at various stages of document development lifecycle:

Requirement gathering stage

Ensure that you do the following at the requirement gathering stage:

- Participate in the sprint planning meeting. **Be visible.** If you are in a different time zone, review the sprint tasks tracking board right after the sprint planning meeting concludes. **Be engaged.**
- Work with the Scrum master and update the documentation assignee field for tasks that impact documentation. **Be engaged.** Share this update in the stand-up meeting. **Be visible.**
- Review wireframes (if any). Use this opportunity to provide feedback on the UI language and workflows. **Be engaged.** Share this update in the stand-up meetings. **Be visible.**

In addition, engage with stakeholders:

- Talk to the product manager to understand WHY users need the identified features and WHAT the benefits are.

- Talk to module developers to understand HOW the features work.

Content generation stage

Ensure that you do the following at the content generation stage:

- Work with the development and QA teams to install the application. **Be visible.**
- Test the application. **Be engaged.**
- If any defects are found while testing the product, raise bugs. **Be engaged. Be visible.**

Content delivery stage

Ensure that you do the following at the content delivery stage:

- Work with the development team to understand and learn the process to check in your help files into the source control, so that you can reduce the dependency on the development team. **Be engaged.**
- During the sprint demo meeting, present the drafts that you created in that sprint. In fact, use this opportunity to highlight which drafts are incomplete due to lack of input, feedback, or late completion of the features. **Be visible.**

In summary, aim to become an integral part of the team by regularly engaging with all stakeholders/SMEs and by being visible at all key meetings and forums. This will significantly change the perception of your contribution.

AIM will help you aim for the best!

ABOUT THE AUTHOR

Akash Dubey works with iManage LLC as director of technical publications and localization. He has nearly 20 years' experience in the field of technical communication and has worked with multinationals such as Hewlett-Packard, Siemens, Cisco Systems, and EMC Corporation. Akash heads India's largest and oldest community of technical communicators and language professionals, Technical Writers of India (TWIN).



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Language technology to the rescue

Kató Speak is a new translation memory tool that was created to enable communication in a humanitarian crisis. But its potential could reach well into the commercial market.

Text by Krissy Welle

In some parts of the world, a voice-activated home device can play your favorite song or teach you how to bake a cake. Yet, in those parts of the world that are experiencing humanitarian crisis, people often aren't able to read instructions to attend to their basic needs, even if they are written in their own language. And they certainly can't ask Alexa to help.

In these situations, speech technology is more than a luxury. Quite often, people affected by a humanitarian crisis are less literate. Women in particular are less likely to be able to read. In such scenarios, having information in an audio format is a need, not a want.

Of course, providing information in an audio format is not enough to ensure understanding. Language also needs to be considered. Yet, to complicate matters further, people living through a humanitarian crisis often do

not speak a language blessed with extensive resources. The languages they speak may not have many trained interpreters, any translation memory, or even a universally accepted script. Speech-to-text or text-to-speech solutions don't exist – in many cases there isn't enough data to build such technology.

This is the situation that my organization, Translators without Borders (TWB), deals with on a daily basis. Due to this predicament of human need and lack of technology, we have developed the first voice translation memory system, Kató Speak.

Kató Speak is a critical development that can help humanitarian organizations communicate with people living through unimaginable disasters. However, the benefits of the budding technology extend beyond the humanitarian sphere, pushing the boundaries of language technology.

Rather than trying to fit commercially developed solutions to the needs of people in crisis, the development of this new technology has reversed the process: The basic human needs of those who speak marginalized languages are the impetus behind Kató Speak.

Developed for a crisis

Since August 2017, more than 700,000 Rohingya people have crossed the border from Myanmar to Bangladesh. They are fleeing persecution and violence in a country where they are subjected to discrimination as an ethnic minority.

International humanitarian organizations mobilized to help the Bangladesh government respond to the needs of the new arrivals. TWB arrived on the scene in 2017 to address the language issue and quickly learned that this was one of the most complicated linguistic situations we had experienced.

Five languages were spoken in the response: Rohingya, Bangla, Burmese, Chittagonian, and English. However, Rohingya was the only language that was accepted universally and that all refugees understood. Yet, the resources for the Rohingya language were limited: There aren't many trained interpreters or translators, many Rohingya are illiterate and, to further complicate matters, there is no agreed-upon, standardized script for the language. Audio messaging was the best solution, yet an efficient, scalable translation solution did not exist.

As TWB began working with humanitarian organizations to support the refugees, we recognized the need to create content in an audio format and to streamline and optimize the process for doing so. Working with on-site responders as well as volunteer translators, we began recording spoken translations to supplement written translations. In



Image 1: A woman in northeast Nigeria meets with TWB for a comprehension survey.

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Image 2: A TWB trainer conducts comprehension research in northeast Nigeria.

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the process, we generated data to fuel a new and unique kind of translation memory system. The resulting technology, Kató Speak, is the first voice translation memory system of its kind, creating an easy way to generate audio communication in underserved languages. It integrates with TWB's own Kató 2.0 translation management environment, and allows responders to record and reuse spoken information that has already been translated into text. The recording process is simple, allowing contributors to submit recordings using a simple web link. Anonymous data is collected including age, gender, and, if available, the geo-located accent of the speaker. This data helps match the speaker to the audience. On some subjects, such as reproductive health, for example, women may be more receptive to a message spoken in a female voice. And, as the recorded dataset grows, the search function can retrieve matching recordings based on text and metadata. This streamlines the process for subsequent translations, helping humanitarians to respond more quickly and with greater confidence. The resulting speech translations can be downloaded as simple MP3 files that contain all relevant data, including the source text. In a humanitarian setting, aid workers can play these recorded translations easily over loudspeakers, radios, or on their phones. These standardized recordings are especially important in a humanitarian context. Refugees

often encounter aid workers associated with many different organizations. Using a translation memory system that can provide consistent voice translations in native languages such as Rohingya ensures that responders are more confident in the translations and information they are providing. It also makes sure that indigenous people aren't hearing conflicting translations that confuse the message. Ultimately, Kató Speak addresses a critical human need. Yet the impact of this new technology can extend beyond the humanitarian world, helping other language technologists advance their text-to-speech and speech-to-text capabilities, especially as more data is collected in marginalized languages.

Implications beyond the humanitarian world

As language technology continues to evolve and adapt, every development can contribute to the whole industry. In fact, Kató Speak was recently recognized as top "invader" technology at the TAUS Game Changer Innovation Awards, demonstrating the industry's recognition of the approach. We will continue to scale this technology, working with our communities of translators to increase the data collection in more languages. We certainly welcome your help as we do so. Kató Speak is one of the first outcomes



Translators without Borders (TWB) is a U.S.-based nonprofit organization that provides language support to humanitarian and international development organizations around the world.

In 2018, TWB translated 22 million words in 277 language pairs, helping countless people access critical information in a language they can understand. TWB also responded on site to humanitarian crises in Bangladesh and northeast Nigeria, developing innovative glossaries, training interpreters, and mapping language needs.

TWB relies on the support of volunteer translators to achieve its mission: a world where knowledge knows no language barriers. If you'd like to use your skills to help people access information in their own language, apply as a volunteer translator at <https://kato.translatorswb.org/signup.html>.

of TWB's Gamayun language equality initiative, which develops language data and technology for marginalized languages. The data generated through Gamayun will be available for others to use. This will help technologists build tools and reduce the gap in knowledge between those speaking more technologically developed languages and those with restricted access to information because of the language they speak. The first voice translation memory system was created as a result of the challenges posed by a humanitarian crisis. Technology does not always develop solely as a result of inquisitive minds and massive funding. It is developed to solve human problems, and the solutions have far-reaching implications, not only for technology and communication, but also for human lives.

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- 🌐 <https://locworld.com>

GALA 2019

- 📅 March 24-27, 2019
- 📍 Munich, Germany
- 🌐 www.gala-global.org

Content Tech Summit

- 📅 April 8-10, 2019
- 📍 San Diego, CA, USA
- 🌐 www.contenttechsummit.com

Information Energy 2019

- 📅 April 11-12, 2019
- 📍 Amsterdam, Netherlands
- 🌐 www.informationenergy.org

MadWorld 2019

- 📅 April 14-17, 2018
- 📍 San Diego, CA, USA
- 🌐 www.madcapsoftware.com/conference

tcworld India 2019

- 📅 February 28 - March 1, 2019
- 📍 Bangalore, India
- 🌐 <https://tcworld-india.com>

Since its first event in 2011, tcworld India has grown into one of the most influential industry conferences for technical communication in India.

The event connects decision-makers and specialists from various industry sectors and regions. The main topics of this year's conference cover:

- leadership and career development
- tools and technology
- trends and nextgen content

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Gilbane's Digital Experience Conference

- 📅 April 29-30, 2019
- 📍 Washington DC, WA, USA
- 🌐 <http://digitalexperienceconference.com>

UA Reloaded

- 📅 May 15-16, 2019
- 📍 St. Leon-Rot, Germany
- 🌐 <https://ua-reloaded.de>

tcworld China 2019

- 📅 May 30-31, 2019
- 📍 Shanghai, China
- 🌐 <https://tcworld-china.cn>

Evolution of TC

- 📅 June 4-5, 2019
- 📍 Sofia, Bulgaria
- 🌐 <https://evolution-of-tc.com>

tekom Spring Conference 2019

- 📅 March 21-22, 2019
- 📍 Vienna, Austria
- 🌐 www.tekom.de/tagungen.html

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This event marks the 25th anniversary of tekom Österreich, our Austrian country association. The program is bilingual

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- 🌐 <https://contentmarketinginstitute.com>

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- 🌐 <http://conferences.tekom.de>

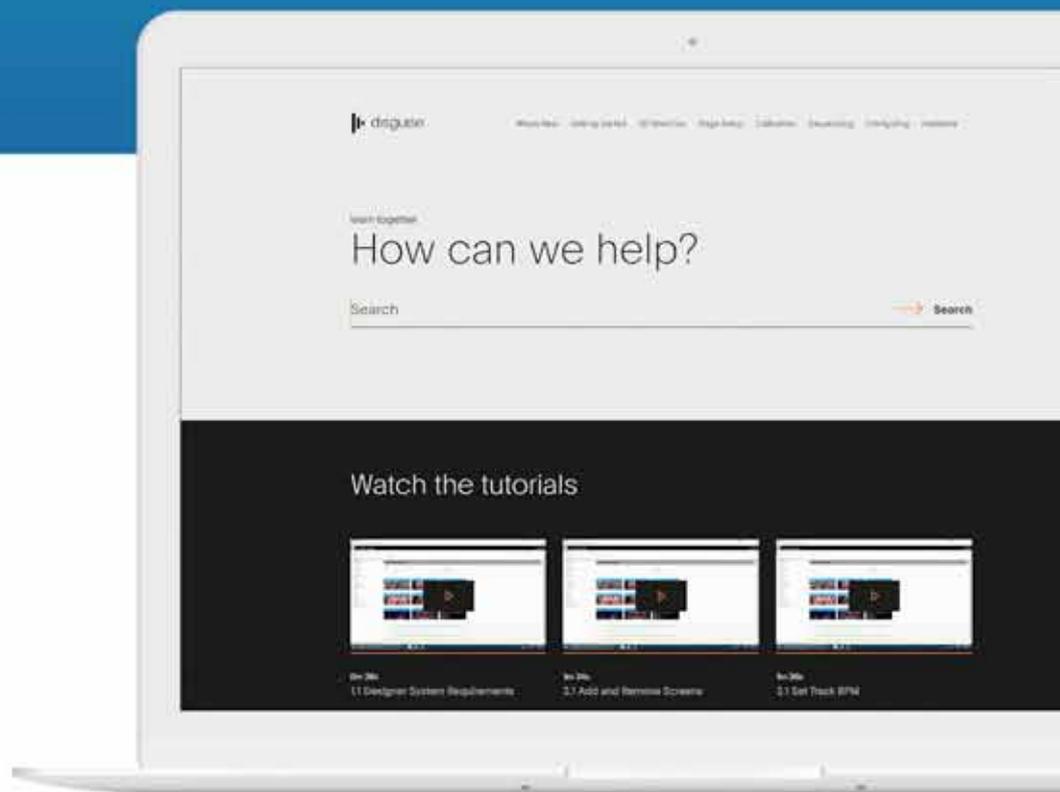
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