Google MUM update: What can SEOs expect in the future?

MUM is short for **Multitask Unified Model** and is a new technology for Google search first introduced in May 2021.

At the Search On 21 in fall 2021, the forthcoming rollout was announced, and the technology was described in more detail. MUM works with artificial intelligence or natural language understanding and processing and answers complex search queries with multimodal data.

MUM is multilingual and processes information from different media formats to answer questions. In addition to text, MUM also understands images, video and audio files.

How does MUM work?

In May 2021, Google introduced MUM as a 1000 times more powerful evolution of BERT. Both technologies are based on natural language processing. But MUM is about more than just natural language processing.

MUM combines several technologies to make Google searches even more semantic and context-based to improve the user experience. With MUM, Google wants to answer complex search queries for which a normal SERP snippet is not sufficient.

The tasks to be undertaken by MUM were presented as follows:

- MUM is to provide a deep understanding of world knowledge.
- MUM is to be trained in up to 75 languages simultaneously to understand them. With previous methods, each language was trained in its own language model.
- MUM should be able to understand the information in

addition to text, images, audio and videos.

The following can be deduced from these statements by Google:

- Google uses MUM to further expand the semantic databases such as the Knowledge Graph and to come closer to the goal of a complete knowledge database.
- With MUM, Google wants to make the international search even better to bring all indices and search instances worldwide to a similar qualitative level, thus guaranteeing the user experience in every country and every language on the planet at the same high level and also working more efficiently, in terms of their own resources.
- Probably the most exciting development for SEOs is that MUM wants to access all media formats to collect information (data mining), understand it and process it in the search results in such a way that the search intention is optimally served and the user experience with the Google search is very high.
- In other words, in addition to the trillions of text-based content, Google also has access to all information from all media formats in the Google systems to increase the (entity) index. As a result, even more information on recorded entities can be generated. Information from text, videos, audio and images can be presented in the SERPs even better for a search query.

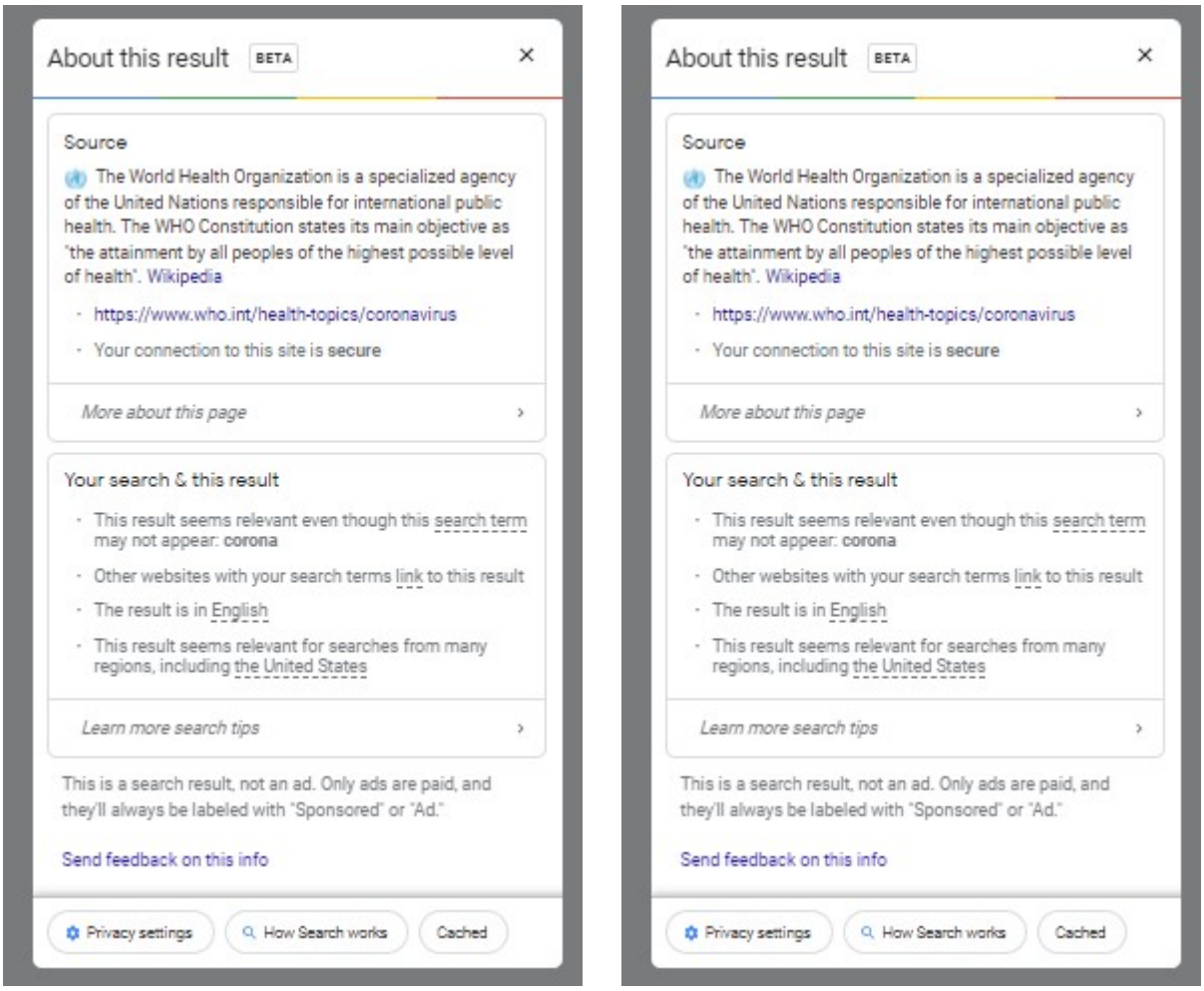
Get the daily newsletter search marketers rely on.

Read more about the new SERP features that MUM brings us in this article: MUM brings multimodal search to Lens, deeper understanding of videos and new SERP features.

Google MUM and E-A-T

In addition to data mining, another major challenge for Google is the validity of the information. Google has been running a quality offensive for years with E-A-T, which should be supported by additional features in the near future.

In direct relation to the respective search result, there is the possibility to get information about the source via an “about this result” box.



About this result BETA
Source
The World Health Organization is a specialized agency of the United Nations responsible for international public health. The WHO Constitution states its main objective as "the attainment by all peoples of the highest possible level of health". Wikipedia
https://www.who.int/health-topics/coronavirus
Your connection to this site is secure
More about this page
Your search & this result
This result seems relevant even though this search term may not appear: corona
Other websites with your search terms link to this result
The result is in English
This result seems relevant for searches from many regions, including the United States
Learn more search tips
This is a search result, not an ad. Only ads are paid, and they'll always be labeled with "Sponsored" or "Ad."
Send feedback on this info
Privacy settings
How Search works
Cached

The information includes a description of the publisher from trusted resources like Wikipedia or the publisher’s website and information on whether the connection to the website is secure. In addition, you can find out what the publisher writes about himself, what others write about him or the topic.

To what extent MUM is used here is not entirely clear.

However, it is quite certain that the authority and trust of the entity or source also play a unique role in the ranking, as described in my article 14 ways Google may evaluate E-A-T explained.

The Google MUM update is the next major paradigm shift for more performance and user orientation

The introduction of MUM represents the next major paradigm shift for Google search after Hummingbird, Rankbrain and BERT. While the previous innovations based on machine learning are based on several trained models for different tasks, the goal at MUM is to use only one model for all tasks related to indexing, information retrieval and ranking.

The focus on only one language model also makes the consideration of different languages □□for the semantic interpretation obsolete. The algorithms are trained based on English-language search queries and documents. They can be applied to all other languages – a significant advantage from a performance point of view and semantic understanding. English is much easier to interpret using natural language processing than grammatically more complex languages □□such as German.

Even before MUM, Google focused on English as the primary language. The first translations from the English-language documents appeared in knowledge panels as early as 2019.



James Bond

Filmreihe

Aus dem Englischen übersetzt - James Bond ist eine fiktive Figur, die 1953 vom Schriftsteller Ian Fleming geschaffen wurde. Ein britischer Geheimagent, der unter dem Codenamen 007 für den MI6 arbeitet, wurde im Film von den Schauspielern ...
Wikipedia (Englisch)

Ursprüngliche Beschreibung aufrufen

James Bond is a fictional character created by novelist Ian Fleming in 1953. A British secret agent working for MI6 under the codename 007, he has been portrayed on film by actors Sean Connery, David Niven, George Lazenby, Roger Moore, Timothy Dalton, Pierce Brosnan and Daniel Craig in twenty-seven productions. Wikipedia



This is a significant improvement for performance reasons. The use of machine learning or natural language processing is only possible if the available resources can be used efficiently. The prerequisite for this is the reduction of the processes running in parallel. There is an efficiency and performance boost by focusing on querying information from just one data model for each search query.

A 2020 Google research paper titled “Multitask Mixture of Sequential Experts for User Activity Streams” describes a

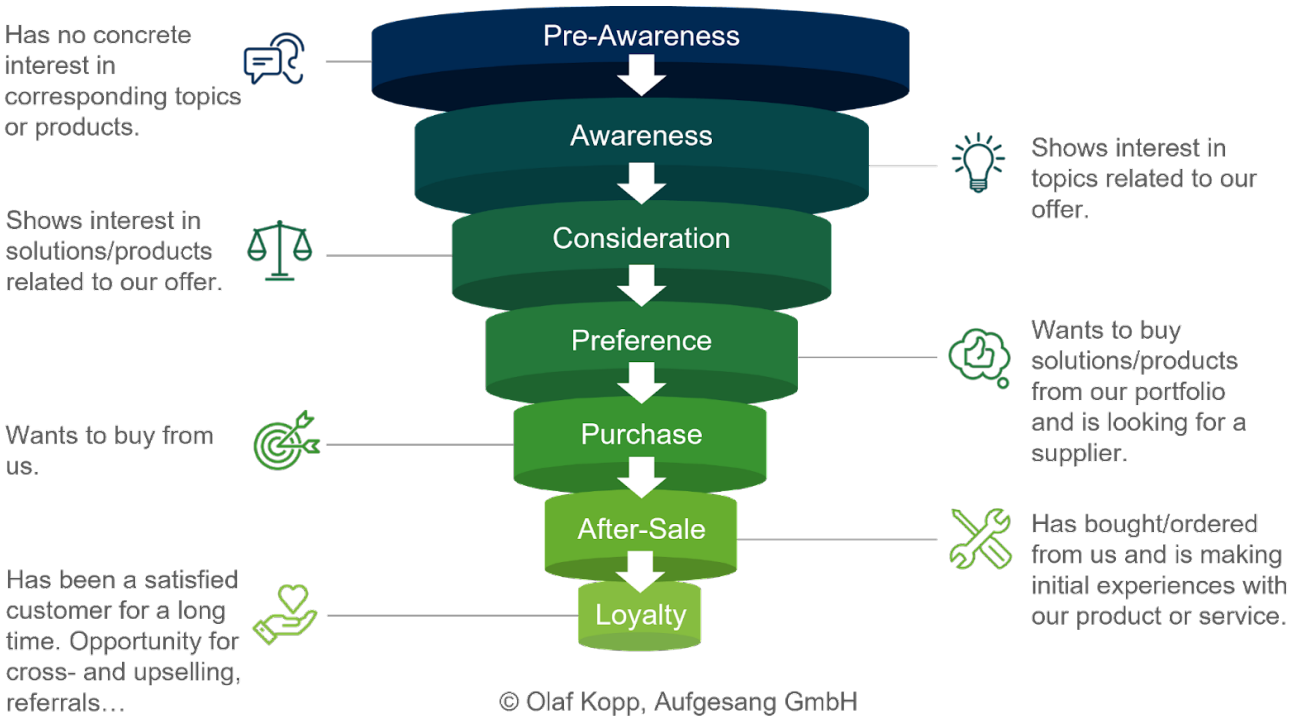
technology called MoSE that is similar to MUM in many respects.

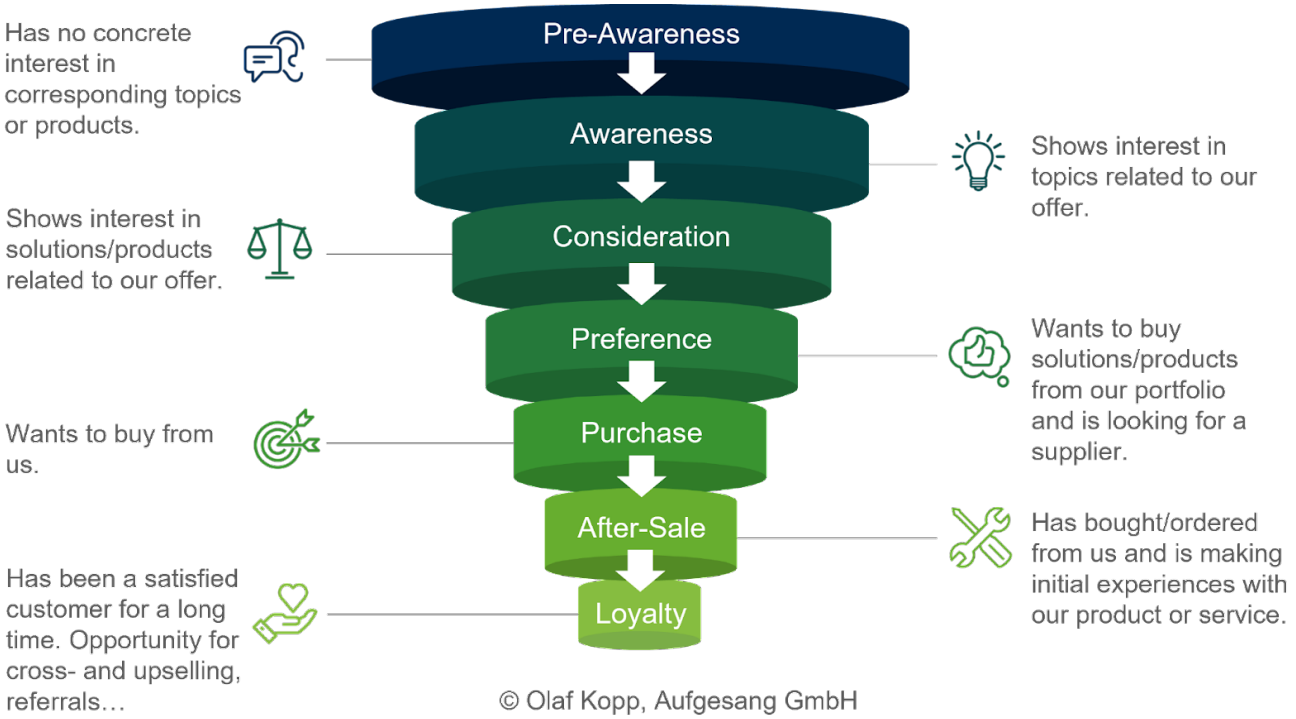
MoSE can summarize very efficiently in a data model based on user data such as clicks and search history. Like classic search engines, it works as market research, starting with the search engine user and not with the indexed information. The user intention is the focus, and based on the model, Google can predict which questions and corresponding answers a user will need during his research.

All the necessary information can be compiled in the SERPs to accompany the user seamlessly through the customer journey.

When it comes to product-based searches, Google has lost some ground to the big e-commerce marketplaces like Amazon and smaller e-commerce platforms. Users in the preference phase of the customer journey often look for the product directly on Amazon, for example. This is difficult for Google from an economic point of view since these users or commercial searches cause the most clicks on ads.

Most Google users use Google for information-oriented searches in the awareness phase. However, Google is currently losing many users to its competitors in the preference phase.





Google wants to provide users with valuable information in the early phases of the customer journey (awareness and consideration). With the new design of the SERPs and the shopping search, Google wants to inspire the user, provide an overview and support the purchase.

This shows that Google has given up the direct fight for product searches in the preference phase and concentrates on its actual strengths. The organization and processing of the

world’s knowledge in a user-friendly form. This is where the big e-commerce platforms can’t keep up.

MUM: The future of Google search and what SEOs can learn from it

MUM is the next piece of the puzzle for Google on the way to a purely semantic search engine that is constantly improving the context of search queries and content. Thus, the relevance of content and content passages to match understands search intent (more to Googles steps to a semantic search engine in my article Googles way to a semantic search engine).

The development of a usable quantum computer is still a long way off, so Google has to deal with efficient technologies such as MUM to use the currently lacking computing power for big-scale machine learning. In this way, Google can further develop its own search systems more quickly without considering the lack of performance on the hardware side. One could say that software development is just overtaking hardware development.

A breakthrough for commercially usable quantum computers is predicted for the year 2029. We can assume that Google search will be a fully semantic search engine by then. A keyword text match in Google search will then be a thing of the past.

Google MUM: SEO must change

At this point, the question must also be asked about what role Google will play as a traffic supplier in the future and to what extent SEOs still directly influence the rankings.

The introduction of BERT and MUM brought drastic changes to the industry similar to those of Panda and Penguin. Natural language processing drives the semantic search based on Hummingbird and Knowledge Graph much faster. SEOs need to

think more about entities and topics concerning E-A-T than keywords.

For the technical SEO, ensuring the crawling and indexing of the search-relevant content remains. But technology does not make it relevant and does not create authority or expertise. Regarding trust (https) and UX (page experience), the technology has a few small levers to intervene in the ranking. However, these levers are not a top position guarantee. Technical tasks such as marking up with structured data will become more and more obsolete since Google needs less and less structured information for understanding via natural language processing.

The content and links remain the most important influencing factors. Links are joined by other important factors that underpin authority. Co-occurrences in search queries and content (text, video, audio and images) are important trust and authority signals. Through MUM, Google has access to significantly more data sources and information. In addition, Google can use language-independent data mining to collect and merge all the information in the world on entities and topics. The previous data silos are being broken open.

This allows Google to answer questions even better and impart really deep knowledge.

Content managers should concern themselves less with the frequency of keywords in their content and consider the perspectives from which a topic should be dealt with. Here the good old TF-IDF analysis is still a tried and tested means of identifying important terms that describe the keyword corpus of a topic.

Content provides the answers to questions. But just producing content will no longer be enough in the future. Google would like to accompany the user through the complete customer journey with answers to get the valuable product-related

commercial traffic to transfer it to their own shopping world. They want to win back market share.

From an SEO point of view, it is becoming increasingly important for those responsible for the content to provide content marketing along the customer journey to provide the user with as many content touchpoints as possible during research.

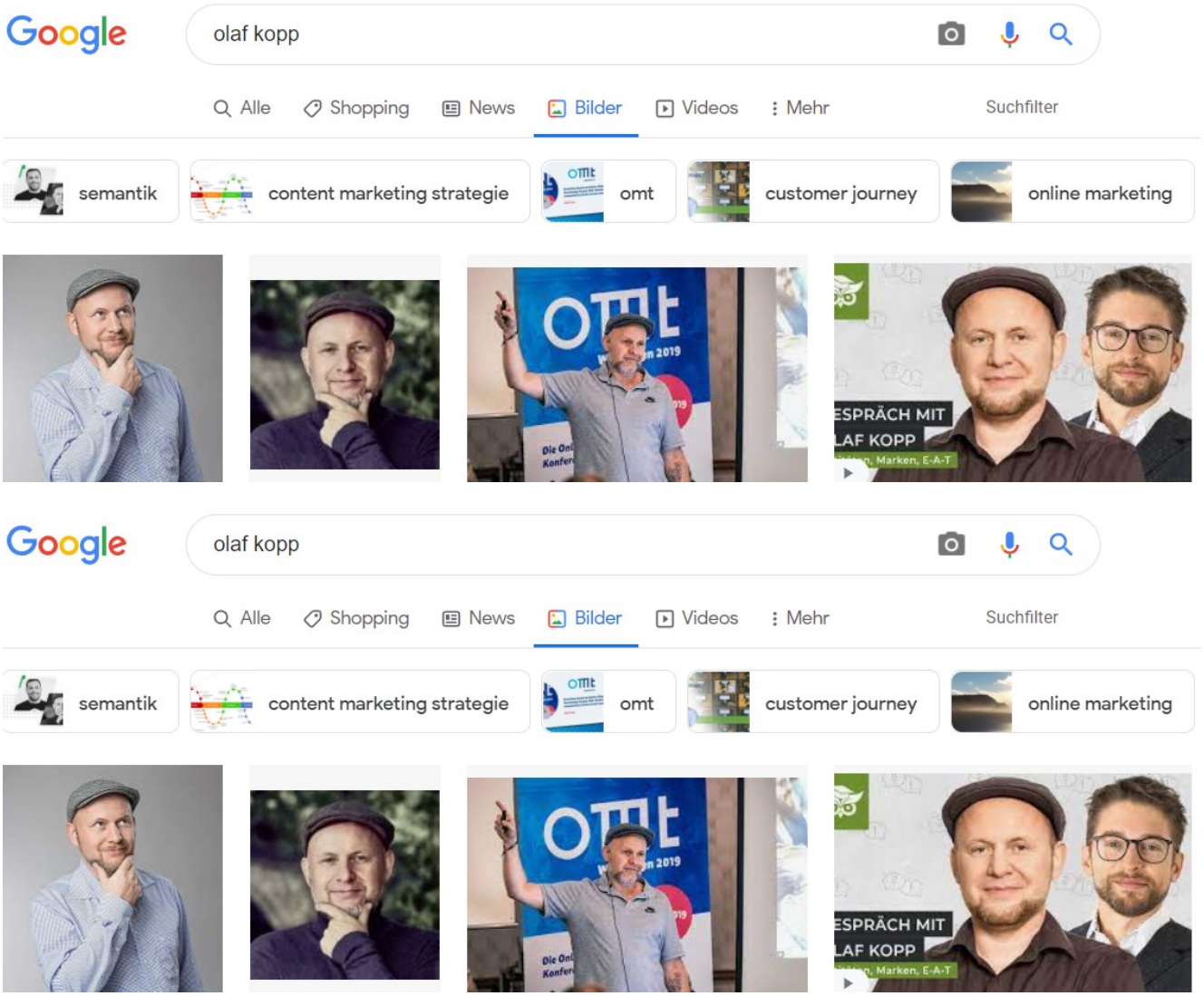
Depending on their level of knowledge, users go through a research process over a shorter or longer period. When looking for solutions with growing knowledge on a topic, users face different challenges and questions that need answers.

Someone new to the topic of search engine optimization is more likely to ask the question, “What is SEO?” Next, they ask, “How does SEO work?” only to realize that the topic is quite complex, and they are more likely to ask “Who offers SEO services?” On this journey, companies should provide the answers.

Content must be user-centric and anticipate needs and questions along the customer journey, just like Google does with MUM. Detailed SERP analyses help to anticipate current and future search intentions.

Google MUM: SEO also for media formats other than text

SEOs focus primarily on text content. MUM makes the SERPs significantly more diverse in terms of media formats, as Google is getting better at understanding video, images, audio and text and putting them in context. You can already see it when you look at the classification of images in the image search, for example, or the automated marking of places in YouTube videos.



Various Google patents signed in 2021 indicate that Google can already interpret audio, video and images. For example, this one: feature-based video annotation.

For SEOs, this means that in the future, when designing the content of audios and videos, they will be able to pay attention to a semantically meaningful design similar to that of text, by using keyword research or TF-IDF analyses. In the future, Google will also better understand the spoken content of videos and audios to rank them on YouTube or a podcast search, for example.

Semantic databases like the Knowledge Graph will also benefit from the additional sources of actionable information about entities for data mining. The combination of high-performance natural language processing and a large number of additional

sources for data mining will significantly speed up the development of the long tail of knowledge.

Thus, the Google MUM update is a further logical development on the way to a semantic search engine.

Google's journey to a semantic search engine



2021 – MUM

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Since 2018, Google has been performing major core updates to its ranking algorithms several times a year with a focus on E-A-T.

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Google introduces Rankbrain Machine Learning for the interpretation of search queries in Google Search. Via vector space analysis, search queries and documents can be better interpreted semantically.

2014 – Knowledge Vault

Google introduces the Knowledge Vault for data mining to expand the "Longtail of Knowledge".

2014 – E-A-T

Google explains the E-A-T principle for the first time in the Quality Rater Guidelines. Via E-A-T, entities can be rated according to authority, trust and expertise.

2013 – Google Hummingbird Update

Google introduces Hummingbird, a new basis for ranking algorithms that enables semantic interpretation of search queries and documents via entities.

2012 – Google Knowledge Graph

Google introduces the Knowledge Graph as a semantic database for Google Search. The Knowledge Graph captures the relationships of entities and their attributes.

2010 – Google buys Freebase

Google buys the semantic database Freebase as the basis for the Knowledge Graph.

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Fewer visitors from Google through MUM in the future?

With innovations such as MUM and BERT, Google wants to display even more answers directly in the SERPs without having to click on the source of the content again. There is a justified concern that Google will continue to turn off the traffic tap and display as much information as possible in its own world.

There is a risk here that the interests of Google and the content publisher diverge, and Google gratefully uses the appropriate content passages without letting the publisher participate. But that is only in the hands of Google itself and how they take into account the balance of interests.

One thing is clear, Google relies on up-to-date content to answer current and future user questions. And as a technology group, Google is able to index information algorithmically and prepare it in a user-friendly way.

However, you will probably never be able to independently build up in-depth specialist knowledge and display it independently of the content provided by publishers. Therefore, one can only trust that Google will continue to reward good content with traffic.

This is a shortened and translated version of the original blog post "Google MUM Update: Was erwartet SEOs in der Zukunft?"

Opinions expressed in this article are those of the guest author and not necessarily Search Engine Land. Staff authors are listed here.

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Olaf Kopp is Head of SEO, co-founder and chief business development officer at the German online marketing agency Aufgesang. His work focuses on digital brand building, content marketing strategies along the customer journey and semantic SEO. He is an author, conference speaker and podcaster. According to various media and industry opinions, his blog is one of the best online marketing blogs in Germany.
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