

Automatic Simultaneous Translation – a service developed by the Interactive Systems Labs

DIGITAL PRESS KIT



The Lecture Translator: A service for students in the lecture halls or international meetings

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The Automatic Simultaneous Translation – a service developed by the Interactive Systems Labs (Karlsruhe Institute of Technology and Carnegie Mellon University)

The Interactive Systems Lab at KIT focuses on technologies that facilitate the human experience, human mutual understanding and communication. Research ranges from speech recognition, translation, speech synthesis, language, vision technologies, person tracking and recognition, multi-modal and cross-modal perceptual interfaces, smart rooms and pervasive computing.

Since 2012, Karlsruhe Institute of Technology (KIT) has installed the **Automatic Simultaneous Lecture Translator** to translate lectures for foreign students and for hearing-impaired students. This service was first addressed by the scientific team of Professor Alex Waibel.

Similar to subtitles in films, students can read the lecture in real time on a computer screen (via the internet). "Our research and the service for our students is advancing constantly", says Prof. Alex Waibel. Additional challenges result as a lecturer does often not complete sentences, has an unclear pronunciation, or does not pay attention to punctuation. Significant improvements were reached through neural networks, a part of artificial intelligence. Scientists also continue to work on achieving adequate translation of technical terms, and on the automatic adaption to new languages.

Other universities have shown interest in the lecture translation system and first field tests are already taking place. [The Karlsruhe Information Technology Solutions - kites GmbH](#) is the competent partner to develop individual solutions.

SCAN ME



<https://lecture-translator.kit.edu/>

The Lecture Translator on video:

[Lecture Translator, general introduction \(2019\)](#)

[Lecture Translator, challenges \(2019\)](#)

[EU-funded project EU-BRIDGE \(2014\)](#)

[Translation on a Phone \(Jibbig\), commercial Apple video](#)

The screenshot displays the Lecture Translator web interface. At the top, there is a navigation bar with links for HOME, CONTACT, LEGALS, and KIT. The main header features the 'Lecture Translator' logo and logos for KIT (Karlsruhe Institute of Technology), Carnegie Mellon, interACT, and EU*BRIDGE. On the left, a sidebar contains links for Sessions, List of Lectures, and Contact. The main content area is titled 'TestSession' and shows a side-by-side comparison of German and English text. The German text on the left discusses training data in neural networks and the challenges of speech recognition. The English text on the right provides a translation of this content. At the bottom of the page, a small footer reads: 'KIT – Universität des Landes Baden-Württemberg und nationales Forschungszentrum in der Helmholtz-Gemeinschaft'.

Interface of the Lecture Translator



Scan the code and visit our YouTube-Page!

The Lecture Translator in the news:

Selection of some articles:

The Guardian: [Is the era of artificial speech translation upon us?](#) UK, 2019, 02-19

Management und Krankenhaus, [Wie kommt das Weltwissen in die Spracherkennung](#) Germany, 2019, 08-07 (in German)

More detailed and overview articles on our research:

Alexander Waibel: [Multimodal Dialogue Processing for Machine Translation](#), in: *The Handbook of Multitmodal-Multisensor Interfaces, Volume 3, Chapter 14*, Association for the Computing Machinery, Morgan & Claypool Publishers

Alexander Waibel: [Sprachbarrieren durchbrechen: Traum oder Wirklichkeit](#), in: *Nova Acta Leopoldina NF 122, No. 410*, pp. 101-123 (in German)

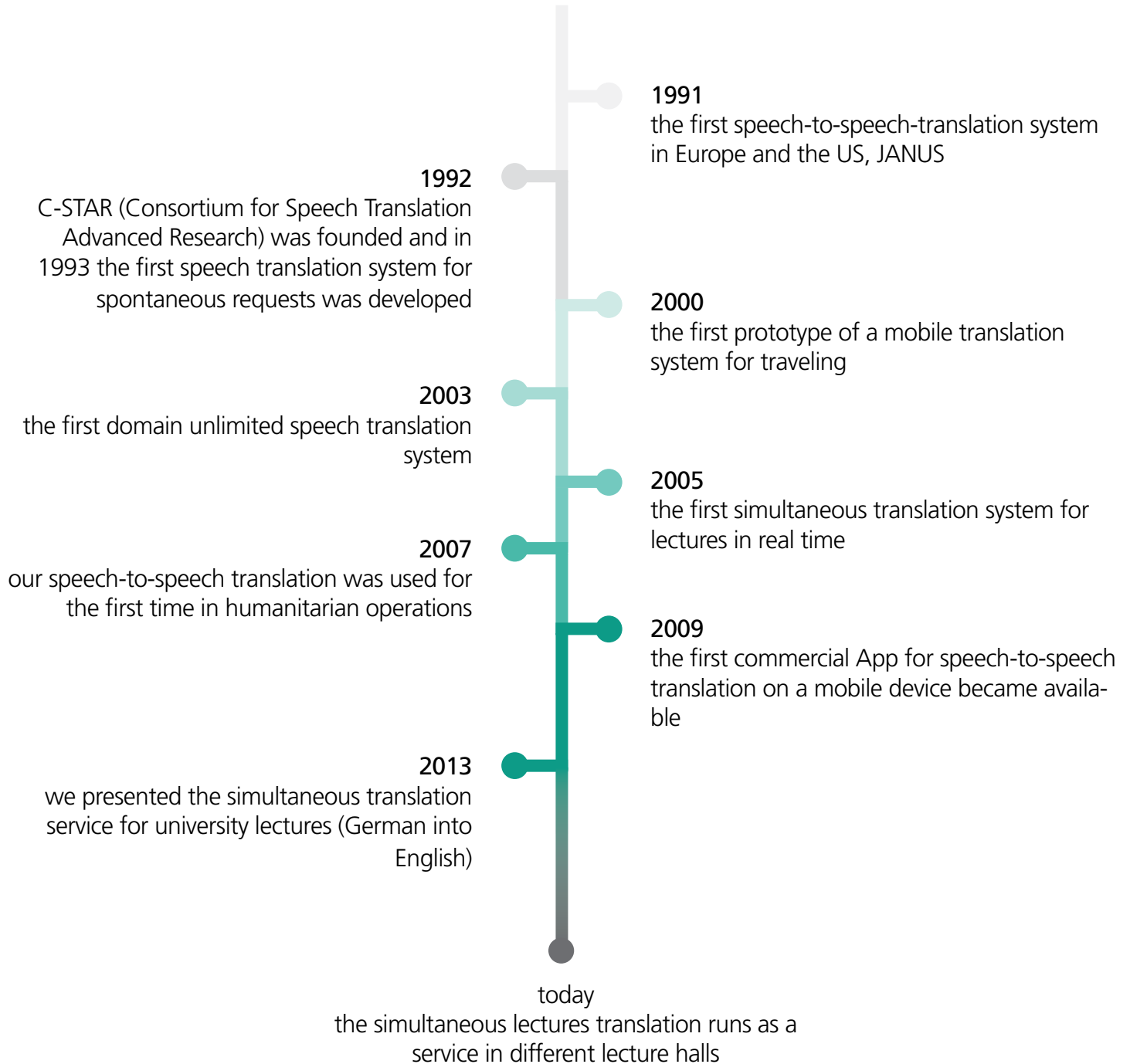


The Lecture Translator can also be beneficial in international meetings!



The Interactive Systems Labs – our “firsts”:

For more than 25 years our lab is doing research in the field of speech technology. Some of our „firsts“ are:



Head of the Interactive Systems Lab is Prof. Alex Waibel

Further information, links and addresses:

<https://lecture-translator.kit.edu/>

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