

Accelerating Workflows with Language Technology

Volker Steinbiss, *Apptek*

**smart content
summit** EU

5 November 2020
12:30 to 17:00 GMT
Global Online

Accelerating Workflows with Language Technology

1993



Volker Steinbiss

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Automatic subtitling with human in the loop

AppTek ASR



Professional Subtitlers



AppTek

German Raptors

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Translating subtitles from a template with a little help from MT



Human or Machine Quiz

<https://apptek-ai.typeform.com/to/NrFYSawm>



Live closed captioning, fully automatic

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newscentermaine.com

SPORTS



<https://www.apptek.com/post/ner-model-infographic-accessibility-series-companion-piece>



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The full pipeline: ASR + MT for gisting purposes



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Audio alignment

Color codes: Correct: Match between transcript and ASR

Substitution(substituted): ASR recognized a different word

Insertion: ASR recognized additional words which are not in the transcript

Deletion: Words in the transcript were not recognized by the ASR

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Segment 1: **0.84 - 6.62** After a season that began in a different calendar year and opened up in California, the playoffs are here.

Segment 2: **7.16 - 17.82** Perfect setting, too. The Barclays being played for the third time here at Ridgewood Country Club, just about **15** miles northwest of Times Square and midtown Manhattan.

Segment 3: **17.22 - 25.93** **5**under the **lead**. **Hunter** Mahan, the only man to play in all **28** of the FEDEXCUP Playoff events.

Segment 4: **25.94 - 28.93** Cameron Tringale and Charles Howell sharing the lead.

Segment 5: **28.99 - 30.5** Rickie Fowler keeping it going with a **68**.

Segment 6: **32.97 - 34.24** Erik Compton as well.

Segment 7: **34.43 - 35.6** Not an easy golf course.

Segment 8: **36.05 - 38.05** Par **71**, **over** **7300**(**he**) **yards**(**was**) **the**(**out**) **layout**(**a**) **here**(**to**)

Segment 9: **38.08 - 46** **Hideki**(**to**) Matsuyama right there with Bubba Watson. He was out in that featured group of the morning.

Segment 10: **46.01 - 48.5** Terry Gannon along with Sir Nick Faldo.

Segment 11: **48.5 - 58.76** And some of the stars from the morning wave, including the man who's who's just been dominant obviously lately. Rory McIlroy starting on the back nine, but a doublebogey. That for par. Struggling early, Nick.

Segment 12: **58.78 - 71.57** Yeah. Well, kind of understandable, you know, after another amazing win rush back to back to Britain, had a bit of fun time and **charged back**. TV shows, all sorts of things.

Segment 13: **72.16 - 75.49** Went out in **40**, got a couple coming in. A **74**, **3over** today.

Segment 14: **75.5 - 79.47** Phil Mickelson with a charge at the PGA Championship, and this for eagle at the **5th**.

Segment 15: **80.59 - 86.6** Up and **over**. A wonderful little hole, the **5th**. Drivable, a sliver of a green perched on the side of a hill.

Segment 16: **86.97 - 90.14** So **71**, even par round for Mickelson.

Segment 17: **90.15 - 97.74** Rickie Fowler, who's who's been so close throughout the major championships, this off the tee at the **2nd**, playing **192** yards today.

Segment 18: **97.82 - 109.84** I'm sure he's he's delighted. He managed to get **a bit of a breather after the** PGA to come back because he's he's used up a lot of energy and it hasn't quite happened, but, you know, maybe the FEDEXCUP is going to be his big grand prize of the year.

Segment 19: **110.12 - 118.05** And Fowler the **68**, **3**under round here on day 1. So he'll go late tomorrow. We'll have him in the coverage window.

Segment 20: **118.12 - 121.18** Adam Scott, former World Number 1, **2**under at this point.

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Leveraging metadata for translation

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How Neural Machine Translation is Revolutionizing Subtitling with Metadata

White Paper - November 2020



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<https://www.apptek.com/nmt/wp>

We provide only the engine



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The seventh example - what matters most to you, next?

Better...

text in video

LID $\rightarrow \frac{1}{2}h$
 $\rightarrow 5sec$

?

video \Rightarrow audio



Punctuation

metadata to generation

better UX in PE

Archives

Speaker diarization

more languages

lower latency

e-

vstembiss@apptek.com

Thank you for listening!

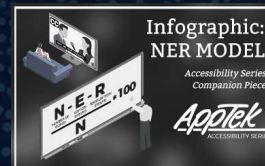
email: vsteinbiss@apptek.com

And here again the QR codes...



Human or Machine Quiz

<https://apptek-ai.typeform.com/to/NrFYsawm>



metadata for MT

