Oracle Digital Assistant
The Complete Training

Voice

Image courtesy of pixabay.com

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Topic agenda

1 ▸ Introduction to voice

2 ▸ Designing for voice channels

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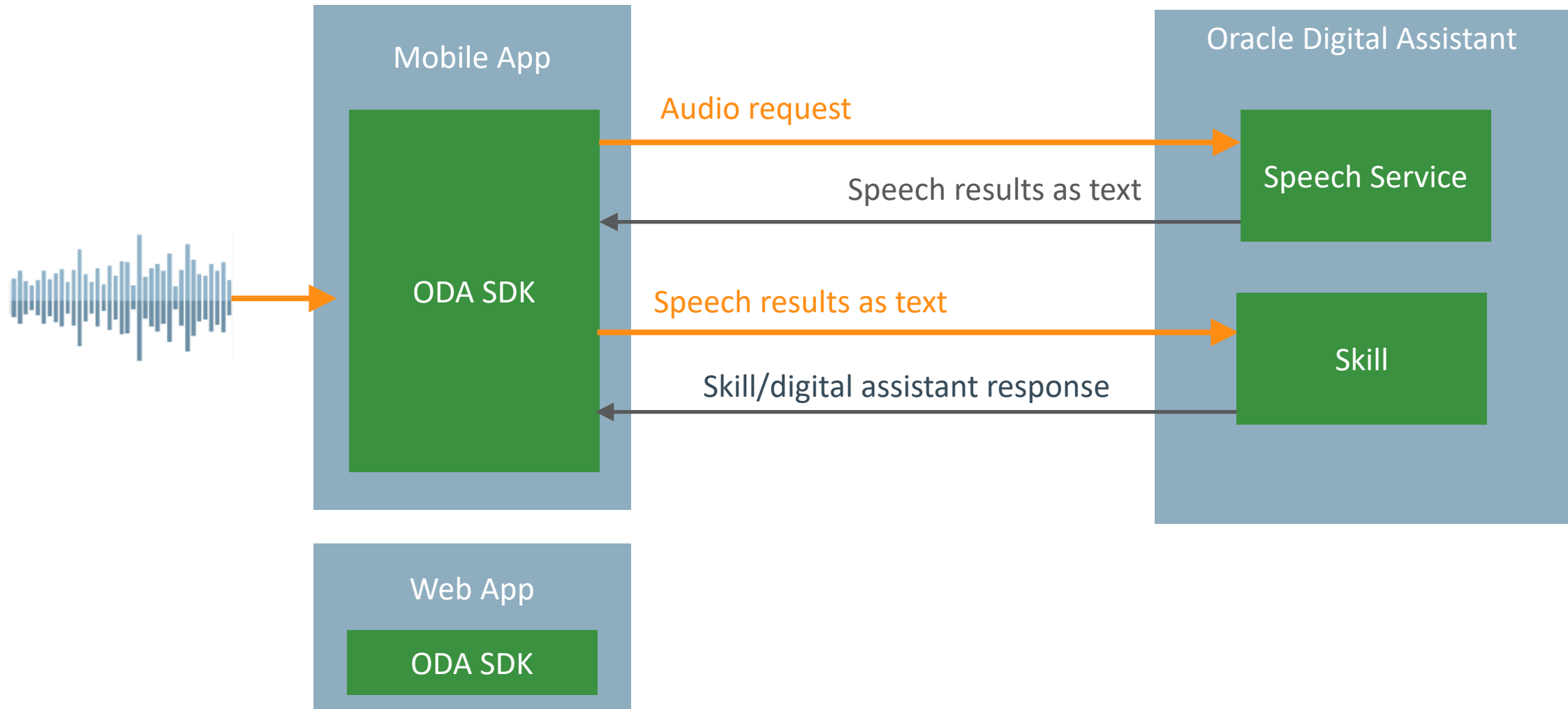
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Introduction to voice

- Voice – we've been doing it for about 100,000 years

- Ability to be more natural, expressive, ease of use, wearables, hands free

- Rise of voice assistants in the home

- Specific set of challenges for Enterprise
  - Data security, privacy, compliance
  - Domain specific vocabulary
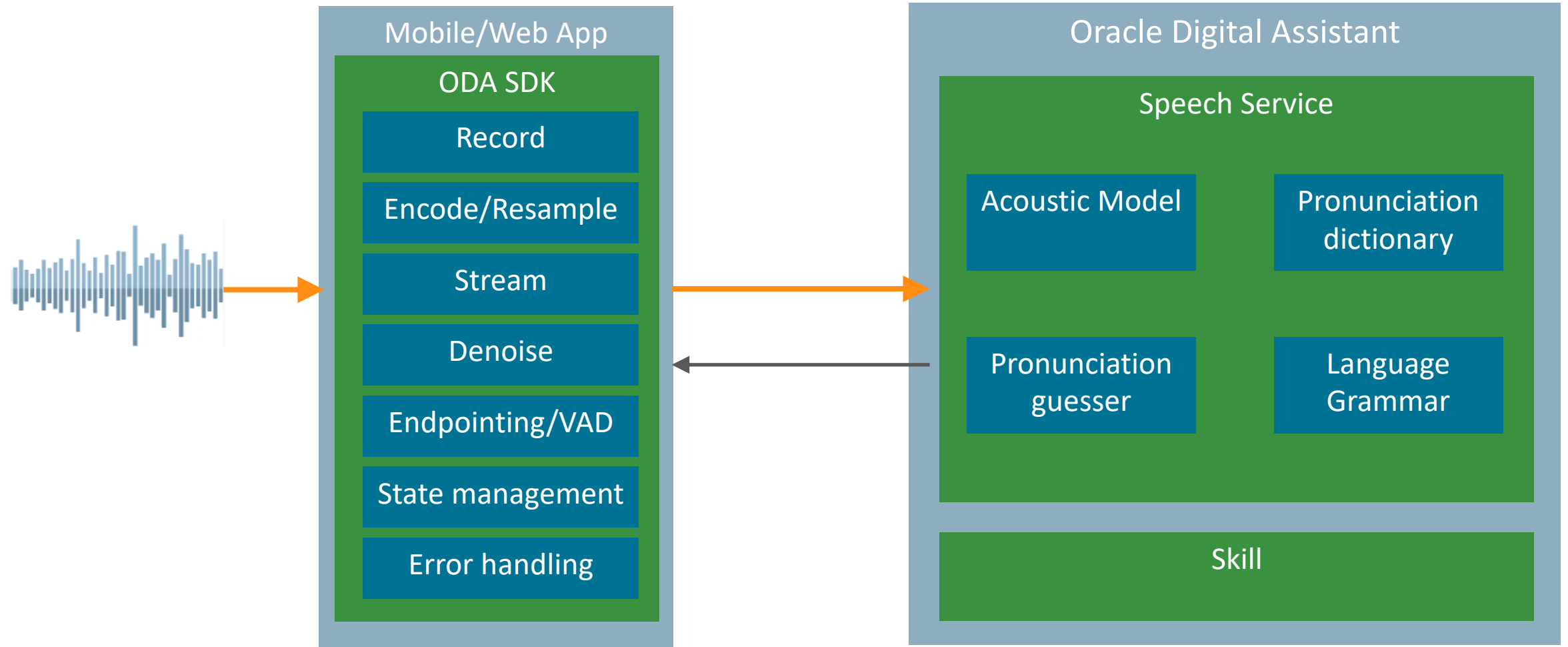 - Voice should be "out of the box"

Introduction to voice

- Oracle provides a voice SDK and server with Oracle Digital Assistant

- Voice SDK provides speech widget
  - Push to talk (PTT)
  - Streams voice to speech server
  - Converts speech to text
  - A skill or digital assistant processes text as it if had been typed
  - DO WE PROVICE THE VOICE FOR TTS?
  - OPTIONS FOR SETTING UP ALTERNATE TTS

Voice in Oracle Digital Assistant

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Designing for voice channels – speech as input

- Speech is just a separate way of providing input; not a whole new processing path

- ODA will convert speech to text then process the text as if it was typed

- But there are some differences
  - Users may say more than they would typically type
  - Users less likely to normalize entity values
  - Speech can mask differences between words
    - Through vs threw (might correctly resolve based on context)
    - Andi vs Andy (almost impossible to know which)

Designing for voice channels – design considerations

- Try to elicit longer, more conversational, responses from users
  - Automatic speech recognition (ASR) does better with more context

- Users remember bad past experiences with poor voice systems
  - Give guidance on the kind of language and to use full sentences

- Users will go off-script so be ready for anything at any time
  - Already a feature of using a digital assistant

- Text-to-speech (TTS) is slow so keep spoken responses short

Designing for voice channels – design considerations

- Domain-specific vocabulary can be hard for to recognize
  - Work around with aliases, synonyms or list selection

- Names are hard to recognize
  - ASR is good with common names, but can't recognize names it has never seen before
  - Bots that use contact lists can work around with list selection/disambiguation instead

- Acronyms and abbreviations are known-hard for ASR
  - Discourage them in your UI and encourage users to speak fully

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