

# WoT AI Services and Gaps

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# AI Services

- Ollama LLM Service
  - JSON in
  - JSON out (***optional streaming – not supported in WoT!***)
- Piper Text-to-Speech Service
  - Text in (plain; URL variable or in POST body, NOT in JSON)
  - Audio out (WAV file, binary)
- Whisper Speech-to-Text (transcription) Service
  - Audio in (WAV, binary) but also other arguments (language, optional)
  - Multipart/form-data: ***not supported in WoT!***

<https://github.com/w3c/wot-testing/tree/main/events/2024.11.Munich/Documentation/Intel>

# Multipart/form-data

- Needed for Whisper
- Send audio/wav and text/plain (for language)
- Suggested resolution here:
  - <https://github.com/w3c/wot-thing-description/issues/1464>

# JSON Object Streams

- Ollama API
  - Streaming JSON objects for real-time updates
  - Has a “done” flag in the last object
  - Objects separated by newlines
  - Also optional, have “stream” flag in request
    - Means would need a variable/dependent output data schema