



Asgard Edge Tølker

Automatic Speech Recognition

User Manual v1.0.0

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Revision History

Document Version	Issued	Notes	Comments
0.1.23	23 April 2026	Installer 0.1.23	First public release.
1.0.0	29 April 2026	Installer 1.0.0	Added stream details to room config, released as v1.0.0

Introduction

ASGARD Tølker is an offline automatic speech recognition application that integrates with the ASGARD EDGE plugin running in a court room environment.

ASGARD Tølker received the following from a single ASGARD Edge Core Plugin:

- ▶ Asgard API connection event information - Asgard Events and details
- ▶ Asgard Audio Stream - Audio for speech recognition

When paired with the Asgard Edge plugin, Tølker provides speech recognition with integrated Asgard events, providing output documents in RTF (rich document format).

The Tølker user may enter notes directly into the produced document during the speech capture phase, providing helpful information appearing in the final document for review after the capture session is closed.

Support Platforms

ASGARD Tølker is supported on the following operating systems:

- ▶ Windows 10 Home, Windows 10 Pro
- ▶ Windows 11 Home, Windows 11 Pro
- ▶ macOS Tahoe 26.3
- ▶ Linux

Hardware & Software Requirements

- ▶ Supported Operation System
- ▶ Intel Server or PC Hardware
- ▶ Arm PC hardware
- ▶ Licensed Asgard Edge Plugin v1.5 or higher, running on a QSC Q-Sys Core

Licensing

ASGARD Tølker requires a feature license installed to the ASGARD EDGE plugin that is to be used with Tølker.

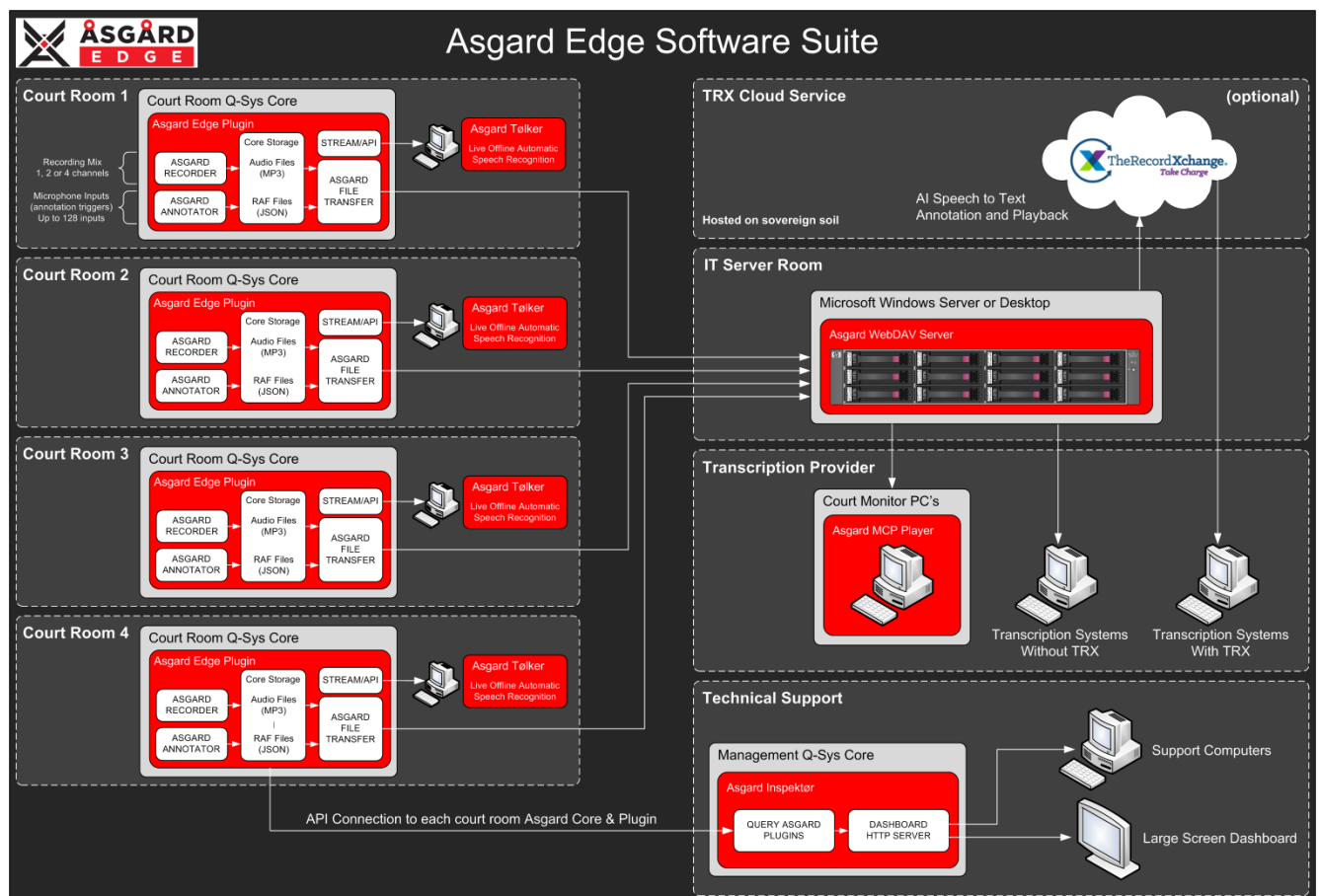
Tølker feature licenses are bundled with the ASGARD EDGE plugin license.

Getting the Installer

The Asgard Edge Tølker installation file is freely available on request to holders of Asgard Plugin production or demo licenses.

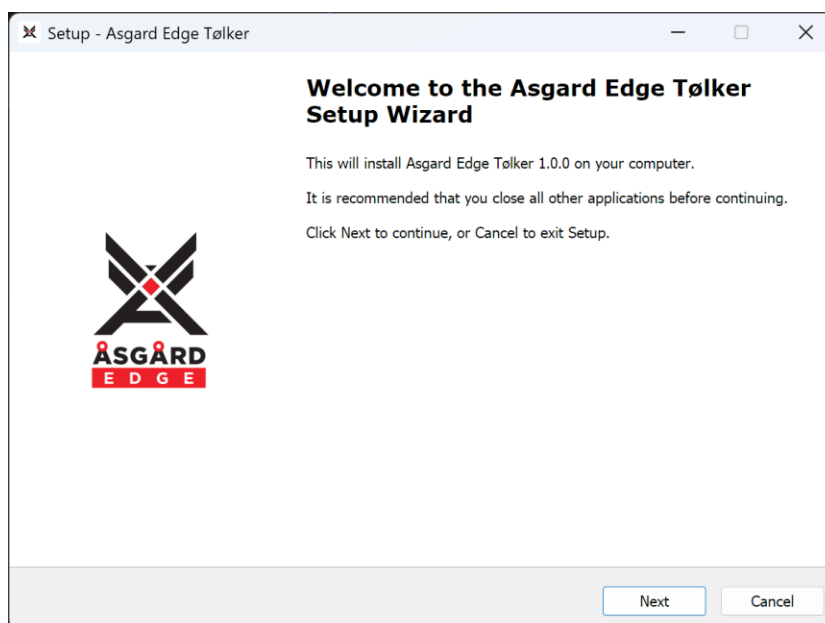
Asgard Software Suite

- ▶ ASGARD EDGE Plug – Capture room audio with metadata and automated file transfer to Asgard WebDAV Server.
- ▶ ASGARD EDGE WebDAV Server – ASGARD EDGE central file storage.
- ▶ ASGARD EDGE MCP Player – Multi-channel playback of ASGARD EDGE recordings with variable speed playback, meta-data and annotation editing.
- ▶ ASGARD EDGE Inspektør – Global monitoring and control of multiple Q-Sys Cores running the ASGARD EDGE Plugin. Inspektør provides health reporting, status monitoring and control of each Asgard Edge room recorder and file transfer settings.
- ▶ ASGARD EDGE Tølker – Real-time off-line Speech Recognition with integration into the ASGARD EDGE Plugin.
- ▶ TheRecordXchange - Cloud-based transcription system that provides automated speech recognition, producing accurate transcription documents.

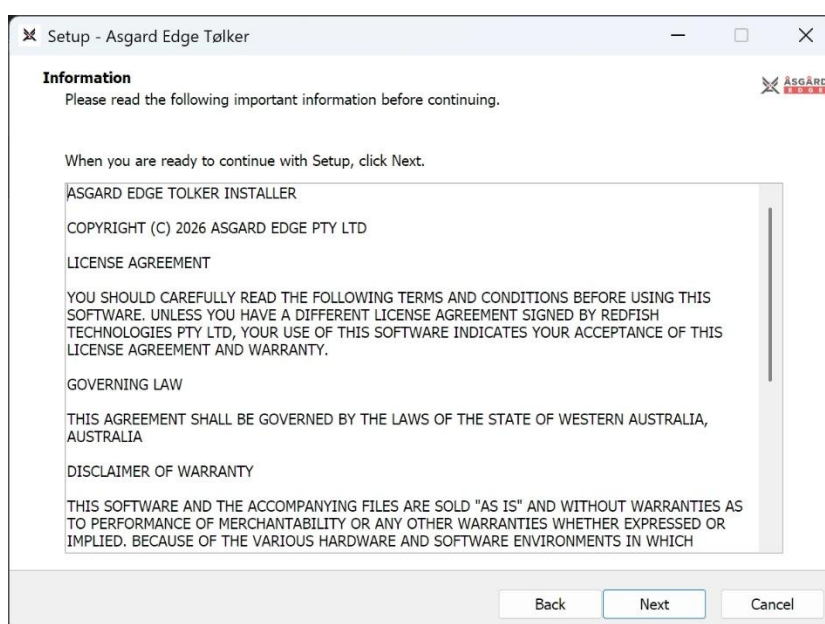


Installation

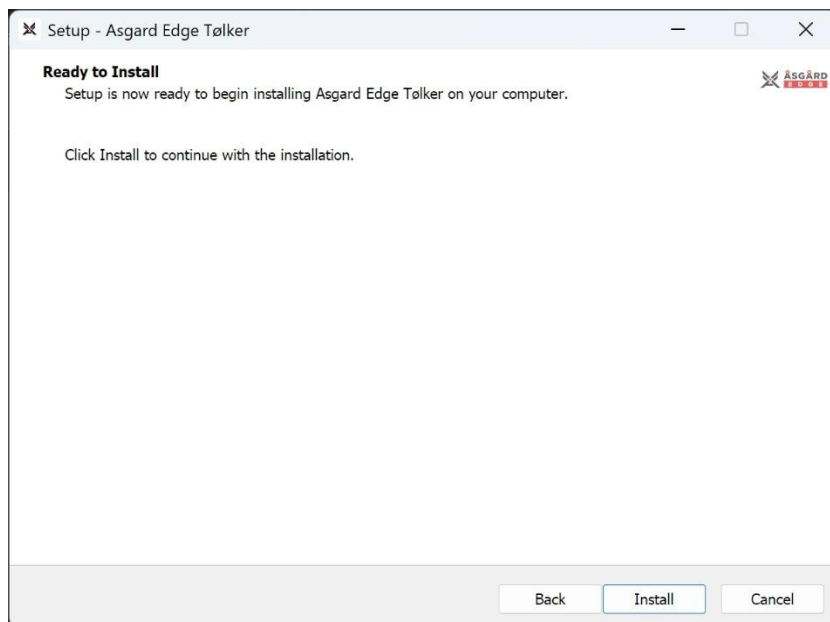
1. Double click on the installer file to start the installation.



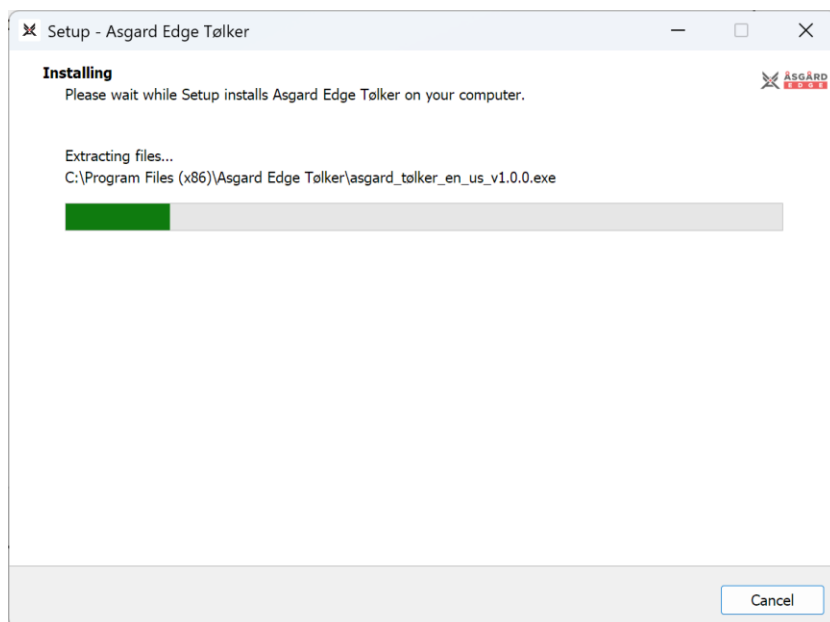
2. Click "Next".

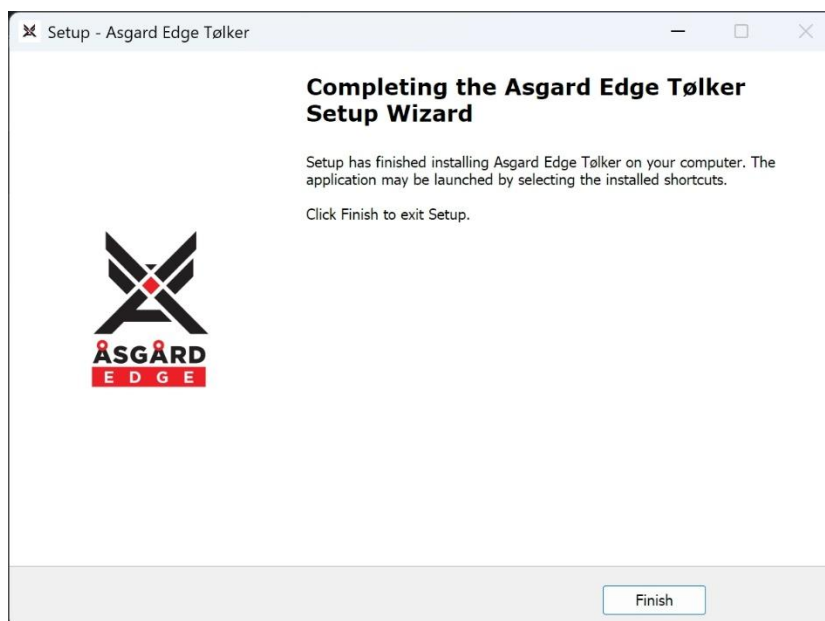


3. Read the copyright information and then click “Next”.



4. Click “Install”. The installation process begins.





5. The installation process is complete, click “Finish”.

Desktop Shortcut

The installation process creates a desktop shortcut to the Asgard Tølker application



Installation Path

Asgard Tølker is installed to the following path:

C:\Program Files (x86)\Asgard Edge Tølker

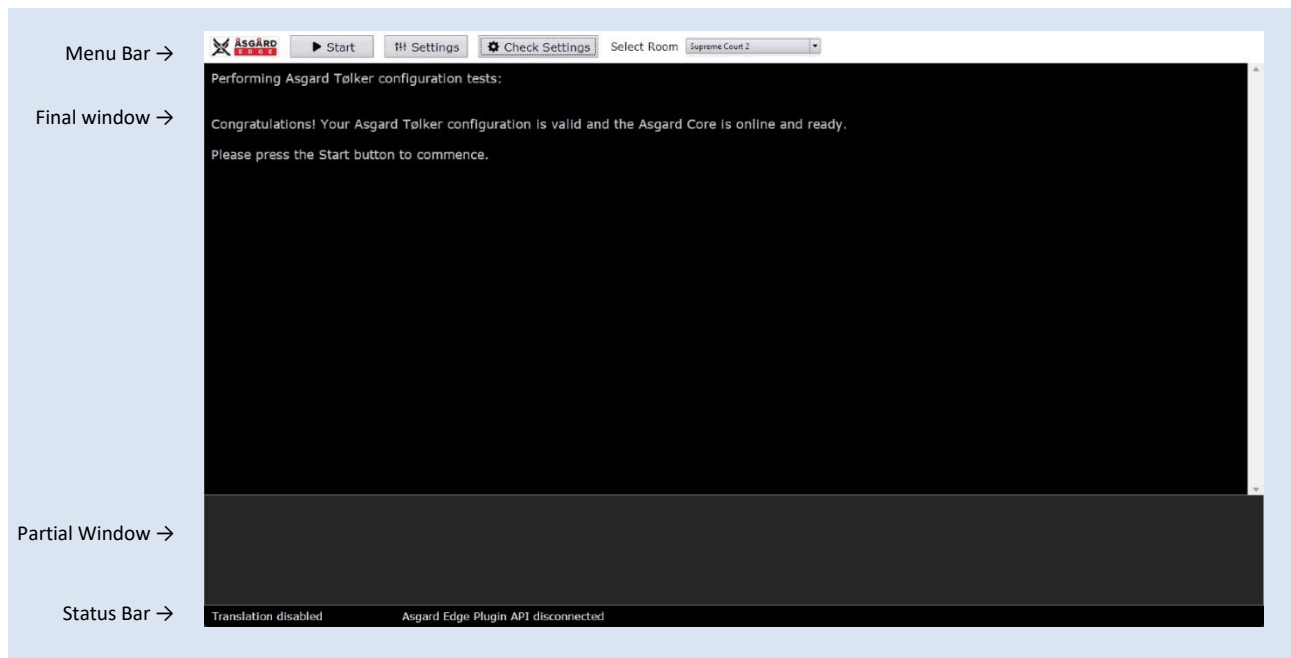
Default Document Paths

When Asgard Tølker is initially installed, the Turn and Full output document paths are set as the Windows user Documents folder, for example:

C:\Users\wayne\Documents\Asgard Tølker

Operation

Startup Interface



Asgard Tølker provides the following key layout sections.

- ▶ Top menu bar with running status
- ▶ Final speech recognition output window
- ▶ Partial speech recognition output window
- ▶ Bottom status bar

Menu Bar

The menu bar provides the controls to configure and start the speech recognition process.

The menu bar is colour coded as follows:

- ▶ White - The speech recognition engine is stopped
- ▶ Black - The speech recognition engine is running, the Asgard Recorder is stopped
- ▶ Red - The speech recognition engine is running, the Asgard Recorder is running

Start

Starts the speech recognition process.

This button changes to “Stop” when the recognition engine is running.

The Start button is greyed out if the selected Room is not available. Room availability is checked when Tølker is first started and each time the Room selection is changed.

Stop

Stops the speech recognition process.

This button changes to “Start” when the recognition engine is stopped.

Settings

Opens the Settings dialog.

The Settings dialog provides a dialog for configuring the Asgard Core connection details, event selection options, output document folder paths, document font style and application screen colours and font sizes.

Check Settings

Initiates a connectivity test with the selected Room. The following are tested:

- ▶ Core API connectivity
- ▶ Core Stream connectivity
- ▶ Output document paths exist

Select Room

A drop-down selection list of pre-configured room names for connection by Tølker.

The room list is populated from manually edited JSON file in the Tølker installation folder.

Final Speech Recognition Output Window

The Final Speech Recognition window is a scrollable window that lists the final speech recognition as it is produced.

The recognised final paragraphs are protected and not editable, however the user may click on the black line between recognised paragraphs and enter text notes.

The entire contents of the Final Speech window are saved to a full output document when the recognition engine is stopped by pressing the Stop button.

The final contents are also written to a “turn” document when the Asgard Recorder starts a new recording turn. The turn documents contain only the paragraphs generated during the turn.

Partial Speech Recognition Output Window

The Partial Speech Recognition window provides a live display of the speech recognition engine progress as paragraphs are being recognised. Once complete, the partial paragraph is inserted to the Final output window.

Bottom Status Bar

The bottom status bar provides an overall operational status of the connection with the current Asgard Plugin.

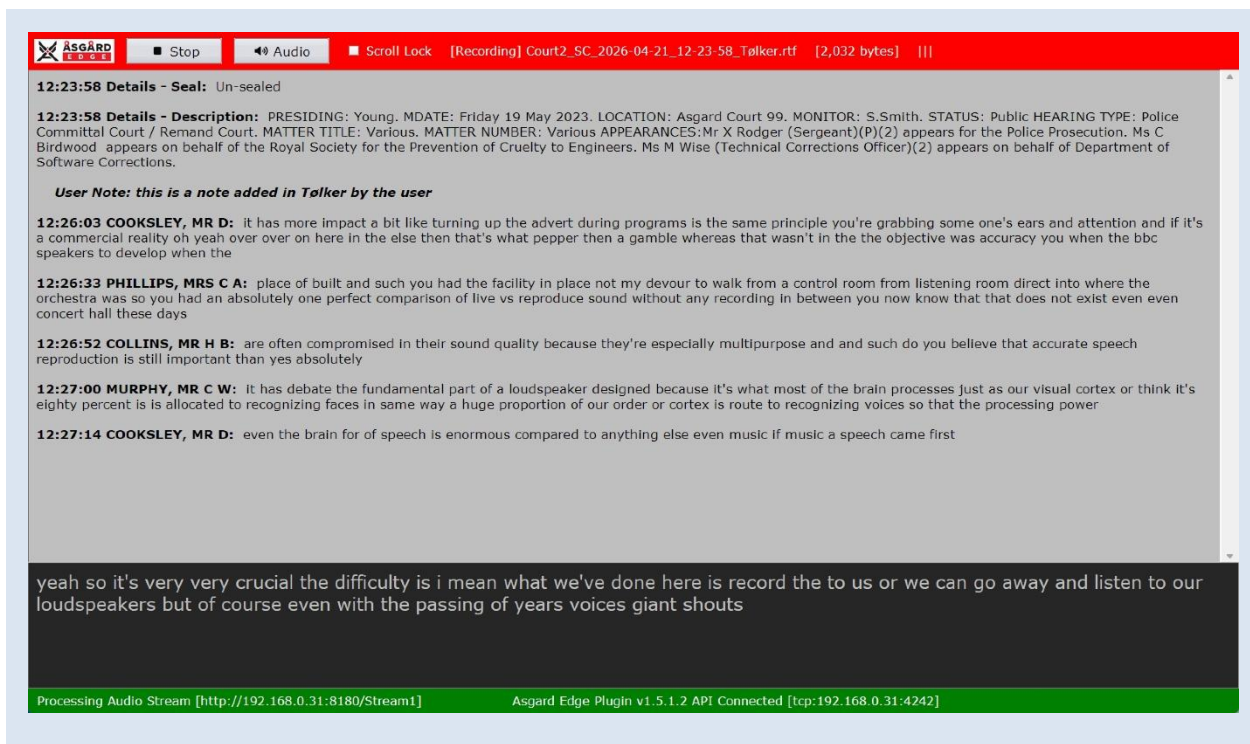
The status bar is divided into two sections:

1. Audio Stream status
2. Asgard Plugin API connection status

The status bar provides visual indication of the Asgard connection with the following colours:

- ▶ Black - The Tølker recognition engine is stopped
- ▶ Blue - Initialising the connection
- ▶ Green - Both the Audio Stream and Asgard Plugin API connection are established
- ▶ Red - When with the Audio Stream or the Asgard Plugin API connection have failed

Recognition Engine Running



12:23:58 Details - Seal: Un-sealed

12:23:58 Details - Description: PRESIDING: Young. MDATE: Friday 19 May 2023. LOCATION: Asgard Court 99. MONITOR: S.Smith. STATUS: Public HEARING TYPE: Police Committal Court / Remand Court. MATTER TITLE: Various. MATTER NUMBER: Various APPEARANCES: Mr X Rodger (Sergeant)(P)(2) appears for the Police Prosecution. Ms C Birdwood appears on behalf of the Royal Society for the Prevention of Cruelty to Engineers. Ms M Wise (Technical Corrections Officer)(2) appears on behalf of Department of Software Corrections.

User Note: this is a note added in Talker by the user

12:26:03 COOKSLEY, MR D: it has more impact a bit like turning up the advert during programs is the same principle you're grabbing some one's ears and attention and if it's a commercial reality oh yeah over over on here in the else then that's what pepper then a gamble whereas that wasn't in the the objective was accuracy you when the bbc speakers to develop when the

12:26:33 PHILLIPS, MRS C A: place of built and such you had the facility in place not my devour to walk from a control room from listening room direct into where the orchestra was so you had an absolutely one perfect comparison of live vs reproduce sound without any recording in between you now know that that does not exist even even concert hall these days

12:26:52 COLLINS, MR H B: are often compromised in their sound quality because they're especially multipurpose and and such do you believe that accurate speech reproduction is still important than yes absolutely

12:27:00 MURPHY, MR C W: It has debate the fundamental part of a loudspeaker designed because it's what most of the brain processes just as our visual cortex or think it's eighty percent is is allocated to recognizing faces in same way a huge proportion of our order or cortex is route to recognizing voices so that the processing power

12:27:14 COOKSLEY, MR D: even the brain for of speech is enormous compared to anything else even music If music a speech came first

yeah so it's very very crucial the difficulty is i mean what we've done here is record the to us or we can go away and listen to our loudspeakers but of course even with the passing of years voices giant shouts

Processing Audio Stream [http://192.168.0.31:8180/Stream1] Asgard Edge Plugin v1.5.1.2 API Connected [tcp:192.168.0.31:4242]

When the speech recognition engine is running, the top menu bar layout changes, the Settings, Check Settings and Select Room list are hidden, replaced by the following controls:

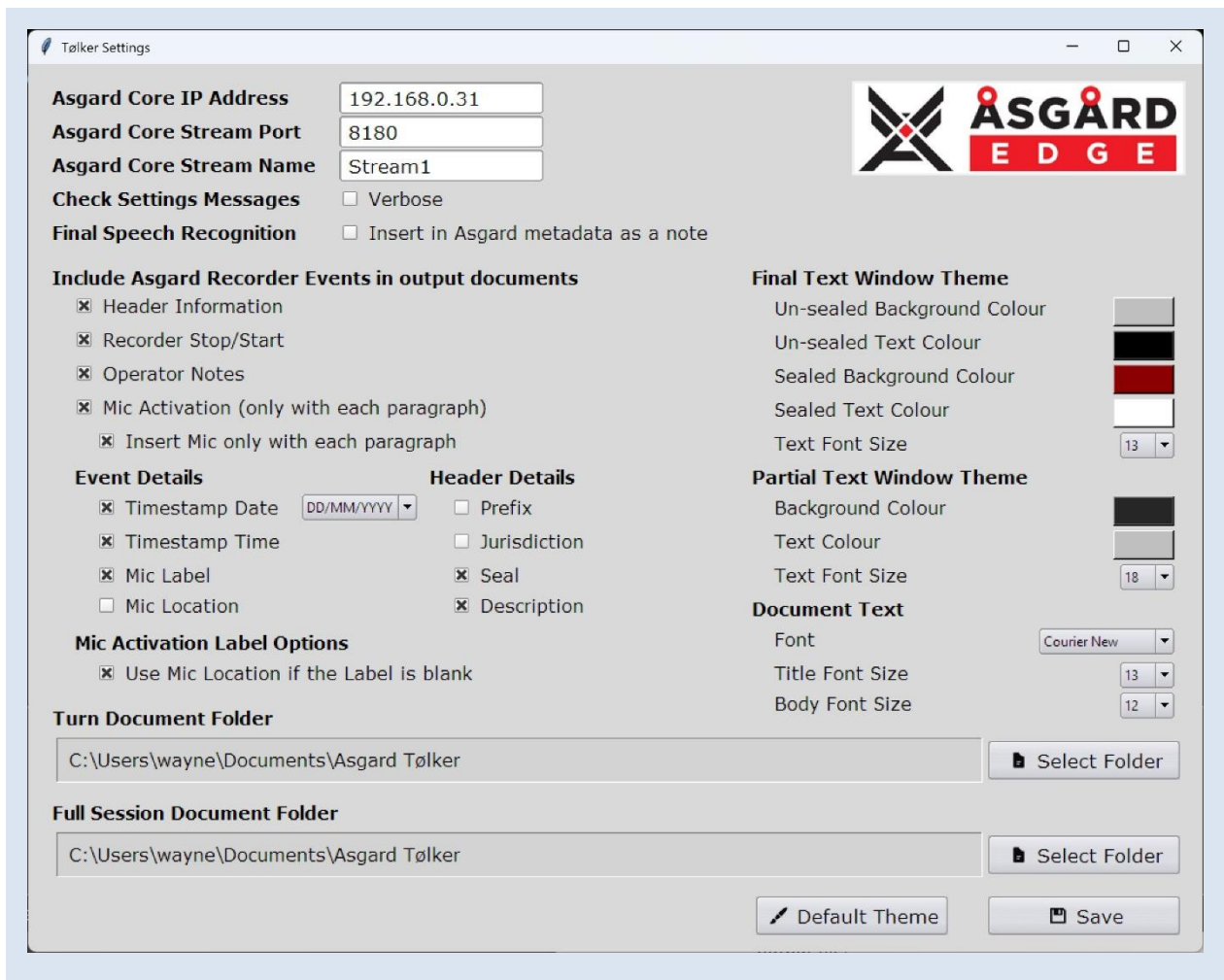
- ▶ Stop - Stops the speech recognition engine
- ▶ Audio - Enables audio monitoring of the audio stream
- ▶ Scroll Lock - Enables the scroll lock, allows scrolling back through the final window
- ▶ Engine Status - Provides feedback of the speech recognition process

Recognition Engine Status

The engine status bar provides the following speech recognition engine fields:

- ▶ Recorder State - Stopped or Recording
- ▶ Turn file - Turn file filename
- ▶ Bytes - The size of the current full file in bytes (characters)
- ▶ Progress - Speech Recognition engine progress bar, cycles as recognition is performed

Settings



The screenshot shows the 'Tølker Settings' window with the following configuration:

- Asgard Core IP Address:** 192.168.0.31
- Asgard Core Stream Port:** 8180
- Asgard Core Stream Name:** Stream1
- Check Settings Messages:** ☐ Verbose
- Final Speech Recognition:** ☐ Insert in Asgard metadata as a note
- Include Asgard Recorder Events in output documents:**
 - ☒ Header Information
 - ☒ Recorder Stop/Start
 - ☒ Operator Notes
 - ☒ Mic Activation (only with each paragraph)
 - ☒ Insert Mic only with each paragraph
- Event Details:**
 - ☒ Timestamp Date (DD/MM/YYYY)
 - ☒ Timestamp Time
 - ☒ Mic Label
 - ☐ Mic Location
- Header Details:**
 - ☐ Prefix
 - ☐ Jurisdiction
 - ☒ Seal
 - ☒ Description
- Mic Activation Label Options:**
 - ☒ Use Mic Location if the Label is blank
- Turn Document Folder:** C:\Users\wayne\Documents\Asgard Tølker
- Full Session Document Folder:** C:\Users\wayne\Documents\Asgard Tølker
- Final Text Window Theme:**
 - Un-sealed Background Colour: [Grey]
 - Un-sealed Text Colour: [Black]
 - Sealed Background Colour: [Red]
 - Sealed Text Colour: [White]
 - Text Font Size: 13
- Partial Text Window Theme:**
 - Background Colour: [Dark Grey]
 - Text Colour: [Light Grey]
 - Text Font Size: 18
- Document Text:**
 - Font: Courier New
 - Title Font Size: 13
 - Body Font Size: 12
- Buttons:** Select Folder, Default Theme, Save

Asgard Core IP Address

Manual entry of the Asgard Core IP Address. This field is updated whenever the Room selection is changed.

Asgard Core Stream Port

The Asgard audio stream network port number.

Asgard Core Stream Name

The Asgard audio stream name.

Check Settings Messages - Verbose

When enabled, verbose messages are produced onscreen during the Check Settings operation.

Final Speech Recognition – Insert in Asgard metadata as a note

When enabled, each final speech paragraph is sent to the Asgard plugin for insertion as a user note into the RAF output file.

Include Asgard Recorder Events in output document

Allows selection of the relevant Asgard Recorder and Annotator events into the final window and output documents.

- ▶ Header Information - Asgard RAF Header information
- ▶ Recorder Stop/Start - Asgard Recorder Stop and Start events
- ▶ Operator Notes - Asgard Notes insertion
- ▶ Mic Activation - Asgard Annotator mic activation events

When Mic Activation is selected, the following sub-option is displayed:

- ▶ Insert Mic only with each paragraph

Enabling this option results in mic event data only appearing with each speech recognition paragraph insertion, otherwise each mic activation event appears as they occur.

Event Details

- ▶ Date - Inserts the date with each event insertion
- ▶ Time - Inserts the time with each event insertion
- ▶ Date Format - Specifies the date formatting for Date insertion and Full document filename

The Date format selection applies to all events inserted, the full output document filename but not the turn output filenames.

When Mic Activation is selected, the following sub-options are displayed:

- ▶ Mic Label - Inserts the Mic Label with each mic event insertion
- ▶ Mic Location - inserts the Mic Location with each mic event insertion

When Mic Label is selected and Mic Location is not selected, the following sub-option is displayed:

When Mic Label selected, the following sub-option is displayed:

- ▶ Use Mic Location if the Label is blank

Enabling this option results in the mic location data appearing with each mic activation instead of the label should the mic label be blank, otherwise the mic label is inserted.

Header Details

Allows the selection of header information header event inserted to the final window and output documents. These options are only provided when the Header Information checkbox is checked.

- ▶ Prefix - Insert the header prefix information
- ▶ Jurisdiction - Insert the header jurisdiction information
- ▶ Seal - Insert the header seal information
- ▶ Description - Insert the header description information

The Header Details are only displayed when the Header information checkbox is checked.

Turn Document Folder

Specifies the output folder for Turn Documents. Defaults to the user's home documents folder.

Full Document Folder

Specifies the output folder for Full Documents. Defaults to the user's home documents folder.

Final Text Window Theme

Provides foreground and background colour selection for the following data:

- ▶ Un-sealed Background Colour
- ▶ Un-sealed Text Colour
- ▶ Sealed Background Colour
- ▶ Sealed Text Colour
- ▶ Text Font Size

Partial Text Window Theme

Provides foreground and background colour selection for the following data:

- ▶ Background Colour
- ▶ Text Colour
- ▶ Text Font Size

Document Text

Provides font style and size for all output documents:

- ▶ Font
- ▶ Title Font Size
- ▶ Body Font Size

Default Theme

Loads the Default Tølker theme.

Save

Saves the settings and closes the Tølker Settings dialog.

Room List Configuration

The Room List is configured with a JSON text file **asgard_tølker_rooms.json** located in the Tølker installation folder **C:\Program Files (x86)\Asgard Edge Tølker**. The rooms file is read once when Asgard Tølker is launched.

The JSON structure provides unlimited room entries, each providing the required room information.

Fields provided

- name - The human readable room name, used to populate the “Select Room” drop-down
- core ip - The Asgard Core IP address
- stream port - The Asgard Core IP address
- stream name - The Asgard Core IP address

The JSON is structured as an array of records.

Structure

```
[
  {
    "name": string,
    "core ip": string,
    "stream port": string,
    "stream name": string
  },
  {
    "name": string,
    "core ip": string,
    "stream port": string,
    "stream name": string
  }
]
```

Example

```
[
  {
    "name": "Supreme Court 1",
    "core ip": "192.168.200.157",
    "stream port": "8180",
    "stream name": "Stream1"
  },
  {
    "name": "Supreme Court 2",
    "core ip": "192.168.200.172",
    "stream port": "8180",
    "stream name": "Stream1"
  }
]
```

Tølker Configuration

The Tølker configuration is stored in a JSON text file **asgard_tølker_config.json** located in the Tølker installation folder **C:\Program Files (x86)\Asgard Edge Tølker**

The config file is read once when Asgard Tølker is launched and saved when the Settings page is closed with the Save button.

Example

```
{
  "core ip": "192.168.0.31",
  "stream port": 8180,
  "stream name": "Stream1",
  "insert asr text as a note in asgard metadata": false,
  "event timestamp time": true,
  "event timestamp date": true,
  "event timestamp date format": "DD/MM/YYYY",
  "event header": true,
  "event header prefix": false,
  "event header jurisdiction": false,
  "event header seal": true,
  "event header description": true,
  "event recorder": true,
  "event note": true,
  "event micon": true,
  "event micon only final": true,
  "event micon show label": true,
  "event micon show location": false,
  "event micon show location if label is blank": true,
  "turn doc folder": "C:\\Users\\wayne\\Documents\\Asgard T\u00f8lker",
  "full doc folder": "C:\\Users\\wayne\\Documents\\Asgard T\u00f8lker",
  "final bg": "gray75",
  "final fg": "black",
  "sealed bg": "red4",
  "sealed fg": "white",
  "final fsize": 13,
  "partial bg": "gray15",
  "partial fg": "gray75",
  "partial fsize": 18,
  "doc title fsize": 13,
  "doc body fsize": 12,
  "doc font style": "Courier New"
}
```

Notes

The above example shows Unicode coding of the word Tølker in the doc folder fields. Backslashes are escaped.

Turn Documents

The final contents are written to a “turn” document when the Asgard Recorder starts a new recording turn. The turn documents contain only the paragraphs generated during the turn.

Turns are created only by user recordings, not by backup recording.

Turn Document Filenames

Turn documents filenames are constructed using strict naming conventions.

The “_” underscore character separates the key portions of the filename.

PREFIX_JURIS_DATE_TIME__Tølker.rtf

Example:

Court2_SC_2026-04-23_19-42-18_Tølker.rtf

Where:

- PREFIX** - Recording prefix text as received in the header prefix field, typically the court room name
- JURIS** - Recording jurisdiction text as set in the Asgard Recorder “Jurisdiction Short” field
- DATE** - The full date indicating when the Asgard Recording commenced
- TIME** - The full time indicating when the Asgard Recording commenced

The complete filename format with the DATE and TIME elements fully expanded is as follows:

PREFIX_JURIS_YYYY-MM-DD_HH-MM-SS_Tølker.rtf

Where:

- YYYY** - The full year including century
- MM** - The numerical month (01..12)
- DD** - The numerical day of month (01..31)
- HH** - The hour in 24-hour format (00..23)
- MM** - Minutes past the hour (00..59)
- SS** - Seconds past the minute (00.59)

Full Documents

The full final window contents are written to a “full” document when:

- ▶ The Tølker speech recognition engine is stopped or;
- ▶ The Tølker application is closed or;
- ▶ The final text data exceeds 2MB in size or;
- ▶ The time is midnight

Full Document Filenames

Full documents filenames are constructed using strict naming conventions.

The “_” underscore character separates the key portions of the filename.

Tølker_Speech_Recognition_DATE_TIME.rtf

Example:

Tølker_Speech_Recognition_23-04-2026_19-45-26.rtf

Where:

DATE - The date the file was created (based on the Date Format in Settings)

TIME - The time the file was created

When the Date Format is:

- ▶ DD/MM/YYYY - DD-MM-YYYY
- ▶ MM/DD/YYYY - MM-DD-YYYY
- ▶ YYYY/MM/DD - YYYY-MM-DD
- ▶ DD-MM-YYYY - DD-MM-YYYY
- ▶ MM-DD-YYYY - MM-DD-YYYY
- ▶ YYYY-MM-DD - YYYY-MM-DD

Where:

YYYY - The full year including century

MM - The numerical month (01..12)

DD - The numerical day of month (01..31)

The Time format is:

- ▶ HH-MM-SS

Where:

HH - The hour in 24-hour format (00..23)

MM - Minutes past the hour (00..59)

SS - Seconds past the minute (00..59)

Turn Document Example

Supreme Court, Court2, Un-sealed

Asgard Tølker v1.0.0 Offline Speech Recognition

Recording Start: 23/04/2026 19:42:18
Recognition Start: 23/04/2026 19:42:18
Recognition End: 23/04/2026 19:45:26

23/04/2026 19:42:18 Details - Seal: Un-sealed

23/04/2026 19:42:18 Details - Description: PRESIDING: Young. MDATE: Friday 19 May 2023. LOCATION: Asgard Court 99. MONITOR: S.Smith. STATUS: Public HEARING TYPE: Police Committal Court / Remand Court. MATTER TITLE: Various. MATTER NUMBER: Various APPEARANCES: Mr X Rodger (Sergeant) (P) (2) appears for the Police Prosecution. Ms C Birdwood appears on behalf of the Royal Society for the Prevention of Cruelty to Engineers. Ms M Wise (Technical Corrections Officer) (2) appears on behalf of Department of Software Corrections.

23/04/2026 19:42:18 Recorder: Started

23/04/2026 19:42:18 BROWN, MR W: many hundreds of man hours of thousands of man hours here at b c worked over what fifty sixty years near perfect has been replaced by a much more aggressive harder wire brittle sort of sound i wonder why that is

23/04/2026 19:42:24 BROWN, MR W: i think it sir is of physiological sociological loop on me most people the music the most people now listen to his of that ilk as well the performance is thy here are you know through the same sort of microphones with pigs in the same aggressive loudspeakers so their brains are condition now to expecting that's that's what riot

23/04/2026 19:42:44 PHILLIPS, MRS C A: and on a course if no one's experience anything different than they don't know like if if you if you'd grew up as a child or wearing glasses with a red filter you think the world with red and you know if someone told you it wasn't his i'm sorry nice you know that it is conditioning because that's that's what their paper exposed to most of the time

23/04/2026 19:43:05 CORKHILL, MR B: and in whose interest is it that commercial sound has become harder who who drives that process fundamentally as to be recording engineers whether it's because as a result of poor live music systems pa systems naturally have that sound and then they want to try and reproduce in the recording studio so therefore they're following

23/04/2026 19:43:24 PHILLIPS, MRS C A: an inaccurate and compromised sound quality as possible whether it's purely because that type of sound grabs the listener has more impact a bit like turning up the advert during programs is the same principle you're grabbing some one's ears and attention and if it's a commercial reality oh yeah over a variety of in the else

Full Document Example

Asgard Tølker v1.0.0 Offline Speech Recognition

Recognition Start: 23/04/2026 08:30:22

Recognition End: 23/04/2026 19:45:26

23/04/2026 08:27:08 Details - Seal: Un-sealed

23/04/2026 08:27:08 Details - Description: PRESIDING: Young. MDATE: Friday 19 May 2023. LOCATION: Asgard Court 99. MONITOR: S.Smith. STATUS: Public HEARING TYPE: Police Committal Court / Remand Court. MATTER TITLE: Various. MATTER NUMBER: Various APPEARANCES: Mr X Rodger (Sergeant) (P) (2) appears for the Police Prosecution. Ms C Birdwood appears on behalf of the Royal Society for the Prevention of Cruelty to Engineers. Ms M Wise (Technical Corrections Officer) (2) appears on behalf of Department of Software Corrections.

23/04/2026 08:30:23 BROWN, MR W: you know the the objective was accuracy you when the bbc speakers of developed when the place of built and such you had the facility in place not my device to walk from a control room from listening room direct into where the orchestra was so you had an absolutely one perfect comparison of live vs reproduce sound without any recording in between

23/04/2026 08:30:50 CORKHILL, MR B: you now know that that does not exist even even concert hall these days are often compromised in their sound quality because they're supposed to be multipurpose and and such do you believe that accurate speech reproduction is still important than yes absolutely

23/04/2026 08:30:59 ROSS, MS M: it has debate the fundamental part of a loudspeaker designed because it's what most of the brain processes just as our visual cortex or think it's eighty percent is is allocated to recognizing faces in same way a huge proportion of our order or cortex is to recognizing voices so that the processing power with

23/04/2026 08:31:20 BROWN, MR W: when the brain for of speech is enormous compared to anything else even music if music a speech came first

23/04/2026 08:31:27 CORKHILL, MR B: yeah so it's very very crucial the difficulty years i mean what we've done here is record the to us or we can go away and listen to our loudspeakers but of course even with a passing of years voices giant shouts it's extremely difficult to him to be consistent and how many loudspeakers these days words you expect to use voice to you speak



User Notes

[illegible]

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