AI transcription in parliaments

Inter-Parliamentary Union
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This guide is intended for small and medium-sized parliaments seeking reliable speech-to-text solutions for transcribing parliamentary proceedings using readily available artificial intelligence (AI) tools. The ideas in this guide are indicative and should be modified to support your own needs. When developing your own approach, consider existing rules and procedures and ensure that what you develop matches your parliament's own processes and requirements.

What is AI transcription?

AI transcription converts spoken parliamentary proceedings into written text using AI. The benefits of such systems include efficiency – through faster transcription and better use of staff resources – and greater transparency.

Modern parliamentary AI transcription systems can:

- identify and separate multiple speakers (diarization)
- handle parliamentary terminology and proper names
- process complex debate formats with interruptions and cross-talk
- integrate with existing parliamentary systems (such as Hansard and broadcasting systems)
- maintain data security within the parliamentary infrastructure

Key parliamentary applications for AI transcription can include:

- official parliamentary records (Hansard)
- committee meeting transcripts
- real-time support for parliamentary officers
- accessibility features for hearing-impaired MPs and members of the public
- multi-language translation and captioning

Real-world parliamentary success stories

Below are three examples of successful AI transcription implementations in parliaments from around the world, each demonstrating a different model and approach.

Angola: Audimus local system

The National Assembly of Angola has implemented Audimus, a local web-based transcription platform that processes one hour of audio in 10 minutes. The system operates entirely offline with no cloud dependency, supports unlimited users with role-based access control, and integrates with network services for secure authentication. As a result, staff who were previously dedicated to manual transcription have been redirected to higher-priority IT tasks.

Chile: OpenAI Whisper with GPU power

The Chamber of Deputies of Chile uses OpenAI's Whisper speech recognition system, coupled with high-performance graphics processing units (GPUs), to perform real-time transcription during sessions. The system provides automatic speaker diarization for up to six participants and offers a live display for the Secretary General during debates. This implementation has enabled same-day publication of session transcripts.

Fiji: Multilingual broadcast integration

The Parliament of Fiji operates a complex multilingual set-up that handles three languages (English, Fijian and Hindi), with interpreters working live in booths. The system uses AI transcription of English for captions and integrates with television broadcasting and streaming platforms. Once fully implemented, this comprehensive model will provide full accessibility across multiple languages and media channels.

Generic AI transcription process

Good-quality transcription starts with ensuring that the audio being captured is of sufficiently high quality. Once a suitable audio recording is available, the AI transcription process typically involves the following steps:

Step 1: Processing the audio

- Running the audio through the AI transcription system.
- Generating the initial transcript with speaker segments and timestamps.
- Creating a rough draft with basic formatting.

Step 2: Reviewing and correcting

- Reviewing the draft by trained editors against the original audio.
- Fixing transcription errors, unclear words and technical terminology.
- Verifying that speakers are correctly identified.
- Ensuring proper punctuation and readability.

Step 3: Formatting for parliamentary standards

- Applying official parliamentary formatting rules.
- Adding session details (date, agenda items, voting records).
- Including proper headings and structural elements.
- Cross-referencing with official parliamentary procedures.

Step 4: Performing a final quality check

- Having a senior editor or similar conduct a comprehensive accuracy review.
- Comparing the final text against the original audio.
- Ensuring all speakers are properly attributed.
- Verifying completeness and compliance with parliamentary standards.

Step 5: Publish and archive

- Releasing transcripts through official channels.
- Making the transcripts available in multiple formats (PDF, XML, searchable online format).
- Storing the transcripts in the parliamentary records management system.
- Ensuring long-term accessibility and preservation.

Generic implementation road map

This road map offers a generic, multi-phased approach to implementing AI transcription. It takes parliaments from the planning stage through piloting to full implementation.

Phase 1: Assessment and planning

- Auditing existing audio infrastructure and parliamentary workflows.
- Defining requirements for identifying speakers.
- Assessing data sovereignty and security requirements.
- Choosing an implementation model based on needs and capacity.
- Developing a business case and secure funding.

Phase 2: Pilot implementation

- Starting with a single committee or non-critical sessions.
- Implementing the chosen transcription system.
- Training an initial group of editors and technical staff.
- Establishing quality-control processes.
- Gathering user feedback and refine workflows.

Phase 3: Gradual expansion

- Extending to additional committees and session types.
- Integrating with existing parliamentary systems.
- Training all relevant staff on new processes.
- Developing custom terminology dictionaries.
- Establishing ongoing support and maintenance procedures.

Phase 4: Fully operational

- Deploying across all parliamentary proceedings.
- Monitoring performance and accuracy metrics.
- Continuously improving AI models with parliamentary terminology.
- Providing ongoing training and support.
- Planning for system upgrades and technology evolution.

Training requirements

Introducing AI transcription tools creates new training requirements for staff involved in parliamentary recording and reporting. Details of the training that will need to be provided to different categories of staff are given below.

Technical staff

- System administration: to manage transcription servers and software
- Audio engineering: to integrate with chamber and committee audio systems
- Quality assurance: to monitor accuracy and system performance
- Troubleshooting: to resolve technical issues during live sessions

Editorial staff

- AI transcription strengths and weaknesses: to effectively review system output
- Speaker identification and diarization: to ensure accuracy
- Quality control: to maintain parliamentary transcription standards
- Digital tools and workflow management: to carry out editorial work within the new environment

Parliamentary officers

- Real-time monitoring: to effectively use live transcription displays during sessions
- System integration: to coordinate transcription with parliamentary procedures
- Quality standards: to understand accuracy expectations and limitations
- Backup procedures: to manage system failures during critical sessions

The speaker identification challenge

Identifying who is speaking in a debate is often the most complex technical hurdle for parliaments. The three main approaches used, each with distinct advantages and limitations, are detailed below.

Manual recording

Staff manually record speaker names and timestamps during live sessions, with metadata matched to transcript segments afterwards. This method, which is used by parliaments in Canada and Estonia, offers the highest degree of accuracy and works with any AI system, but requires dedicated staff and carries potential for human error.

AI voice recognition

The system is trained on MPs' voice samples so it can automatically identify speakers by their voice patterns. Parliaments in Bahrain and Brazil have adopted this method. The system becomes fully automated once trained, although it has to be trained on samples from all MPs and can struggle with similar-sounding voices.

Hybrid approach

This method combines AI automation with human oversight. The AI system separates different voices into segments through speaker diarization, while human staff manually identify which segments belong to which speakers. This approach offers a balance of automation and accuracy but still requires human oversight for optimal results.

Integration with existing parliamentary systems

Implementing and operationalizing AI transcription requires integrations with existing systems at several levels. Some examples and related considerations are given below.

Audio infrastructure

- Committee rooms: multi-room audio distribution (like the campus-wide system used in Fiji)
- Chamber systems: integration with existing conferencing systems
- Recording systems: connection to Hansard recording equipment (FTR machines)
- Broadcasting: integration with parliamentary television and streaming systems

IT systems

- User management: network integration for secure access
- Document management: connection to parliamentary records management systems
- Publishing systems: automated export to official websites and archives
- Workflow management: integration with existing editorial and approval processes

Critical infrastructure

- Power and cooling: adequate power and ventilation for GPU systems
- Network capacity: high-bandwidth, low-latency networks for real-time systems
- Backup systems: redundancy for critical parliamentary sessions
- Physical security: secure server rooms and access controls

Data sovereignty and security

Parliaments must determine their security requirements carefully, based on individual circumstances, and adopt a deliberate approach.

Parliamentary proceedings can often involve sensitive political discussions, confidential committee work and national security considerations. It is therefore important to consider where such data is held and how secure it is, potentially using two-factor authentication through institutional credentials for high-security data.

Conversely, for more basic data that is (or will end up) in the public domain, the requirements can be considered less onerous. It might, for example, be acceptable to use third-party cloud-based services.

A summary of data-related considerations and approaches for data at each of these levels is given in the table below:

Consideration	Basic	High-security
Control of data	None other than existing document management	Recordings and transcripts remain within parliamentary infrastructure
Location of data	Commercial cloud	Audio never sent to third-party cloud services
Access control	Access via user ID and password	Role-based permissions with audit trails
Encryption	Data transmitted through https but no formal encryption requirements	Data encrypted in transit and at rest
Compliance	Informal or none	Meeting national data protection and parliamentary privilege requirements

Security implementation examples:

- Angola: Exclusively local processing, with no data sent to external cloud services
- Chile: Local GPU processing with controlled access to transcription platforms
- Fiji: Secure authentication via institutional credentials, plus encrypted storage

Multilingual considerations

Multilingual support becomes necessary when parliaments face constitutional or legal requirements for supporting multiple official languages, accessibility needs for translation or interpreting to serve diverse populations, broadcasting requirements that demand multiple language channels, or international relations work involving diplomatic proceedings.

Technical complexity

Based on the implementation in Fiji, multilingual set-ups require professional interpreting facilities including booths, complex multichannel audio distribution systems, simultaneous transcription of multiple languages, multiple audio tracks in streaming and television broadcasts, and capabilities for generating subtitles in multiple languages.

Implementation approach

The recommended approach begins with implementing a single language system, adding interpretation infrastructure, then integrating AI transcription for the primary language. Once this

foundation is established, parliaments can expand to additional languages based on interpreter availability and conclude with full integration across broadcasting and streaming systems.

Technology requirements

Technology requirements for AI transcription range from simple to complex depending on the chosen approach:

- The simplest model uses a cloud-based subscription with minimal local technology. Although reliable internet connectivity and basic computers are required for file upload and transcript review, technical complexity is shifted to the service provider.
- Local server implementations typically require standard computer hardware and commercial transcription software that can run on existing parliamentary IT infrastructure.
- High-performance, real-time systems need specialized processing hardware capable of handling live audio streams, often requiring dedicated workstations with advanced processors and memory configurations.
- Multilingual broadcast solutions demand comprehensive audiovisual infrastructure including professional broadcasting equipment, multichannel audio routing systems, and interpreting facilities, as well as integration with existing parliamentary broadcasting capabilities.

Cost estimates for AI transcription implementation will vary significantly based on location, existing infrastructure and specific requirements. The ranges given in the table below, expressed in United States dollars, provide general guidance.

Model	Set-up cost	Ongoing cost	Implementation time frame
Cloud subscription	$0–$500	$20–$150 per user per month	1–3 days
Local server	$5,000–$15,000	Minimal (maintenance only)	2–4 weeks
High-performance, real-time	$2,000–$8,000 + software	Low (hardware replacement cycles plus software licensing)	4–6 weeks
Multilingual broadcast	$150,000–$500,000	Medium to high (specialist support)	6–12 months

Parliaments should also consider other factors that affect total cost of ownership over time:

- Hardware system lifespan (typically between five and seven years)
- Upgrade requirements
- Potential software licensing changes
- Staff training investments
- Integration requirements with existing parliamentary infrastructure

Cloud solutions may appear cost-effective initially but can accumulate significant expenses over time, while local systems require higher upfront investment but offer greater long-term cost predictability and data control.

Key success factors

The most effective and successful way for parliaments to implement AI transcription services is to start small and scale up gradually. Beginning with pilot implementation in less critical settings allows the institution to build confidence and expertise before full deployment, while providing time for staff adaptation and process refinement.

Data sovereignty considerations are important for parliamentary institutions. Parliaments should choose local processing unless cloud services meet strict security requirements or data is in the public domain. Maintaining control over sensitive parliamentary data and ensuring compliance with national data protection laws is essential.

Investment in quality control processes cannot be overlooked. AI transcription serves as a tool, not a replacement for human oversight, so maintaining rigorous editorial standards for official parliamentary records remains crucial. Training staff to effectively review and correct AI output ensures the integrity of the final product.

Planning for integration complexity is essential given that parliamentary systems are inherently complex with many interdependencies. Adequate time must be allocated for integration with existing audio, IT and publishing systems, and infrastructure upgrades should be considered as part of the implementation planning process.

Mobilizing internal champions accelerates successful adoption. Early engagement of parliamentary officers, IT staff and editorial teams, combined with adequate training and support for all users, helps demonstrate clear benefits and gain buy-in across the institution.

Conclusion

AI transcription can significantly improve the speed, accuracy and accessibility of parliamentary records when implemented thoughtfully. The key to success lies is choosing the right approach for your parliament's specific needs, capacity and constraints.

Several important insights emerge from parliamentary implementations around the world:

- Most parliaments prefer local processing for security and data sovereignty reasons.
- Speaker identification remains the most complex technical challenge, requiring human oversight.
- Quality-control processes are essential since AI assists but does not replace editorial judgement.
- Gradual implementation allows for learning and refinement without disrupting critical operations.
- Integration planning is crucial given the complexity of parliamentary systems and their many interdependencies.

Success depends on realistic expectations, adequate training and a commitment to maintaining the high standards required for official parliamentary records. The most effective approach is to start with a pilot project, learn from real-world examples like those presented in this guide, and scale up based on proven results.

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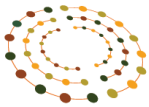

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Appendix

Five implementation models for parliaments

Model 1: Local server model (as used in Angola)

Best for:

Parliaments prioritizing data sovereignty and security

Workflow:

1. Audio is recorded and uploaded to a local, intranet-based transcription platform.
2. The AI system processes the file and generates text with speaker segments.
3. Editors review the text using a built-in text editor and apply corrections.
4. The final transcript is archived and published through the parliamentary website.

Key requirements:

- Standard server/PC hardware
- Web-based transcription software (e.g. Audimus)
- Local network only – no internet required
- Role-based user management system

Model 2: GPU-powered real-time model (as used in Chile)

Best for:

Parliaments wanting instant live transcription during sessions

Workflow:

1. Audio feeds directly from the chamber sound system to the AI transcription engine.
2. Every 10 minutes, text segments are sent to a central editing platform.
3. Editors diarize the text and merge it into coherent records.
4. Real-time output is displayed for parliamentary officers.

Key requirements:

- High-spec PC with a GPU (NVIDIA RTX A4000 or better)
- Real-time transcription software (e.g. Whisper)
- Integration with chamber audio systems
- Live display systems for parliamentary officers

Model 3: Cloud-based subscription model

Best for:

Parliaments with reliable internet connectivity and flexible data policies

Workflow:

1. Session audio is recorded using existing chamber systems.
2. Audio files are uploaded to the cloud transcription service.
3. The AI system processes the files remotely and returns the transcripts.
4. Staff download, review and edit the transcripts locally.
5. The transcripts are exported to the required formats for archiving and publication.

Key requirements:

- Reliable, high-speed internet connection
- Cloud transcription service subscription
- Data security compliance verification
- Local editing and formatting capabilities

Model 4: Multilingual broadcast integration (as used in Fiji)

Best for:

Parliaments with multiple official languages and multilingual broadcasting needs

Workflow:

1. Chamber audio passes through interpreting booths for multiple languages.
2. The AI system transcribes the selected language track for captions.
3. All language tracks are integrated into broadcast/streaming feeds.
4. Parliamentary staff access any language track for official records.

Key requirements:

- Full broadcast infrastructure with interpreting booths
- Multichannel audio distribution system
- AI transcription with caption generation
- Integration with television production and streaming platforms

Model 5: Hybrid post-processing model

Best for:

Parliaments wanting to test AI transcription with existing workflows and on data suitable for the public domain (this is a good starting point for parliaments wanting to explore AI transcription)

Workflow:

1. Audio is recorded using existing processes.
2. Recordings are sent to the AI transcription system (local or cloud-based) after sessions.
3. AI output is used as a first draft for the existing editorial team.
4. Established quality-control processes are followed.
5. Parliament increases reliance on AI gradually as confidence builds.