

# Accessible Presentations Using LaTeX

An Illustration

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# Introduction

# It can be done

The compiled pdf for this slide deck was rated as **99% accessible** by the accessibility checker built into CarmenCanvas.

- These slides are the product of my own experience learning to make presentations that are accessible to blind and low vision users. However, I am not an accessibility expert. I am also not a LaTeX expert. The notes offer some tips, but they are not meant to be comprehensive.
- As of June 2026, accessibility features are in active development and some are not yet automatically integrated into LaTeX/Overleaf functionality. Hopefully this will improve with time.

# Why accessible slides?

- Making presentation slides that are accessible to blind or low-vision audience members ensures that **everyone** can engage with your content.
- To comply with the Federal ADA Title II Digital Accessibility rule, OSU is requiring all digital materials, **including course lecture materials**, to transition to accessible formats.
- Documents produced using LaTeX are **not** accessible by default.

# Details

# The ltx-talk class

- Many LaTeX classes for slide decks/presentations are not compatible with accessibility features. This includes the popular beamer class.
- This slide deck is an illustration of the ltx-talk class, which is designed as an accessible replacement for the beamer class.
  - ltx-talk package: <https://ctan.org/pkg/ltx-talk>
- These example slides also use font colors that have high contrast to the slide background colors

# The ltx-talk class

- The ltx-talk class has native tagged PDF support, so it builds a compiled pdf with core accessibility features, including:
  - Structural elements (e.g. headers, bulleted lists) are tagged in ways that can be interpreted by screen readers
  - Semantic tags support alternative text (alt-text) descriptions of figures
  - Math equations are output in ways that can be interpreted accurately by screen readers (thanks to embedded MathML generated when compiling via the LuaLaTeX engine)
- Tagging also allows the output to be converted to other accessible digital formats (e.g. HTML, ePub)



# Mostly beamer syntax

- The ltx-talk class will accept most beamer syntax, including the frame environment and many layout options, making it possible to convert existing slides from beamer to ltx-talk.
- If converting from beamer, I recommend the following online converter tool (free!), created by Gerry Pedraza (Texas A&M Engineering Studio for Advanced Instruction and Learning):
  - Beamer-to-LTX-Talk: <https://gerrypedraza.com/projects/beamer-to-ltx-talk-transformer-for-accessibility/>
- (These slides started from a presentation converted using the Beamer-to-LTX-Talk tool.)

# Not compatible with beamer themes

- ltx-talk is not compatible with some beamer themes, including Metropolis and Moloch. Compatible themes (not implemented here) include Stage-talk and Spectrum.
  - Stage-talk (by Beamer Atelier): <https://beameratelier.com/ltx-talk.html>
  - Spectrum: <https://ctan.org/pkg/beamertheme-spectrum?lang=en>
  - beamertheme-tcolorbox – A beamer/ltx-talk inner theme to reproduce standard beamer blocks using tcolorboxes: <https://ctan.org/pkg/beamertheme-tcolorbox>
- However, compared to beamer, ltx-talk more rigidly separates document structure from visual design, with the latter controlled by a template system. See the ltx-talk documentation for details.

# Packages used by linguists

- Some packages that are helpful for linguistics are compatible with accessibility requirements, including **linguex**, **tipauni**, and **graphicx**.
- Others are partly compatible, including **forest**, **tikz**, **hyperref**, and **stmaryrd**.
- Incompatible packages include **gb4e** and **tipa**.
- A full list of the status of LaTeX packages and classes is available at:  
<https://latex3.github.io/tagging-project/tagging-status/>.

## A few technical bits

- As of writing, released Overleaf versions of TeX Live do not support accessibility features. It is necessary to sign up for the **Rolling TeXLive** (through Overleaf Labs) and then set your project to use this.
  - Overleaf Labs: <https://www.overleaf.com/labs/participate>
  - In your Overleaf project directory: File > Settings > Compiler > TeX Live version > Rolling TeXLive (Labs)
- The compiler should be set to **LuaLaTeX**.
  - In your Overleaf project directory: File > Settings > Compiler > Compiler > LuaLaTeX
- For ltx-talk slides, the **ltx-talk.cls** document class file is required.
  - Package on CTAN: <https://ctan.org/pkg/ltx-talk?lang=en>
- For **all** accessible LaTeX documents (including other document classes), the first line of your .tex file **must** contain (before the document class declaration!):

```
\DocumentMetadata{tagging = on}
```

See the LaTeX Tagging Project documentation for other parameters that can be set.

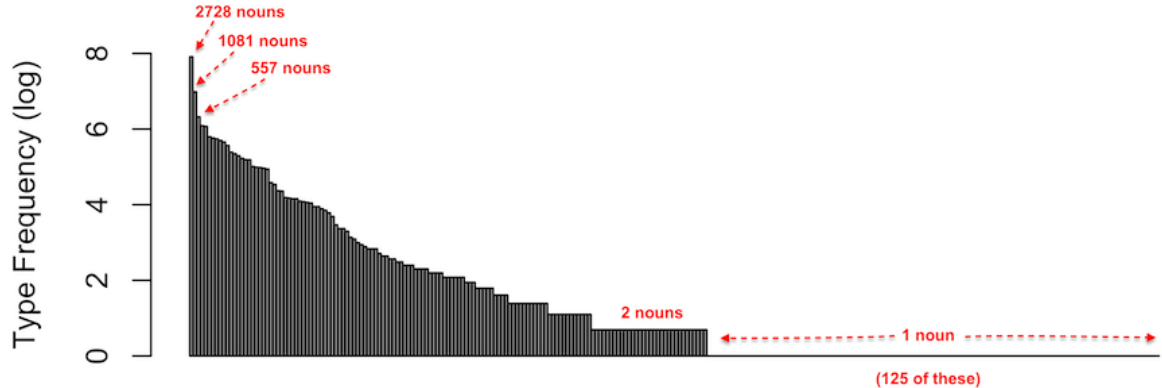
# Examples

## Example of a table using \tabular

	STUDENT 'student (M)'	SELO 'village (N)'	ŽENA 'woman (F)'	LJUBAV 'love (F)'
NOM.SG	student	selo	žena	ljubav
GEN.SG	studenta	sela	žene	ljubavi
DAT/LOC.SG	studentu	selu	ženi	ljubavi
ACC.SG	studenta	selo	ženu	ljubav
VOC.SG	studente	selo	ženo	ljubavi
INS.SG	studentom	selom	ženom	ljubavlju
NOM.PL	studenti	sela	žene	ljubavi
GEN.PL	studenta	sela	žena	ljubavi
DAT/LOC.PL	studentima	selima	ženama	ljubavima
ACC.PL	studente	sela	žene	ljubavi
VOC.PL	studenti	sela	žene	ljubavi
INS.PL	studentima	selima	ženama	ljubavima

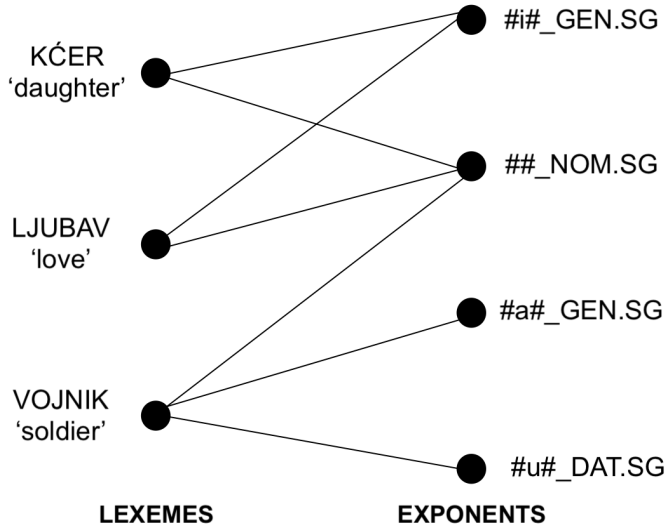
# Example of a full-width figure using \includegraphics

Image files can be inserted in the same way as for other document classes.



(Distribution of Bosnian/Croatian/Montenegrin/Serbian (BCMS) nominal inflection classes, generated from a preliminary version of NašLex (Sims & Copot, 2026))

# Example of side-by-side figure and text using \minipage



`\minipage` can be used as in other document classes to place side-by-side text, images, tables, etc.

(A toy bipartite graph, showing a subsection of the BCMS nominal system, based on Copot & Sims (2025).)



# Example of a glossed, numbered example using the linguex package

Linguex works.

- (1) Ovo je                      rečenica.  
this COP.3SG.PRS sentence  
'This is a sentence.'

## Example of IPA using the tipauni package

Phonetic text can be input with the tipauni package using TIPA commands. Some examples:

Theta: [θ]

Retroflex [t]: [ɭ]

Esh: [ʃ]

Glottal stop: [ʔ]

Palatal voiced stop: [ɟ]

Engma: [ɱ]

Note that although accessibility compatible, the tipauni package will not automatically display correctly if a compatible font (e.g. CMU Serif or Doulos SIL) is not used. See the .tex file for these slides for a fix that involves overriding the default font.

# Resources

# Useful links

Creating accessible PDFs in LaTeX (by Overleaf):

<https://docs.overleaf.com/writing-and-editing/creating-accessible-pdfs>

The LaTeX Tagging Project: <https://latex3.github.io/tagging-project/>

The ltx-talk package: <https://ctan.org/pkg/ltx-talk?lang=en>

Beamer to ltx-talk: Accessible presentation conversion platform (by Gerry Pedraza): <https://gerrypedraza.com/projects/beamer-to-ltx-talk-transformer-for-accessibility/>

Some ltx-talk examples: <https://www.texdev.net/ltx-talk/>

Some examples of implementing accessibility features for different kinds of document classes (e.g. article) (by the LaTeX Tagging Project):

<https://latex3.github.io/tagging-project/documentation/usage-instructions>

The tagpdf package: <https://ctan.math.washington.edu/tex-archive/macros/latex/contrib/tagpdf/tagpdf.pdf>

# References

Copot, Maria & Sims, Andrea D. 2025. Community detection in inflectional networks. In Barner, David & Bramley, Neil R. & Ruggeri, Azzurra & Walker, Caren M. (eds.), *Proceedings of the 47th Annual Meeting of the Cognitive Science Society*, 325–332. Cognitive Science Society.

Sims, Andrea D. & Copot, Maria. 2026. NašLex: A Bosnian, Croatian, Montenegrin, and Serbian inflectional lexicon. v. 1.0.0 [dataset]. doi:10.5281/zenodo.20039927

## Extended Description Annex

Accessibility descriptions for images used in this presentation (also included as alt-text for the images). If the beamer to ltx-talk online converter is used, image description slides will be generated automatically from the alt-text.

A histogram with BCMS inflection classes ( $N = 268$ ) ordered by descending type frequency on the x-axis and the log type frequency of the class on the y-axis. The distribution is highly skewed, with the highest type frequency class having 2,728 nouns, the second highest having 1,081 nouns, the third highest having 557 nouns. The remaining classes descend in a roughly Zipfian distribution. 125 classes contain a single noun.



## Image Description: bcms-bipartite-network

A toy example of a bipartite graph. The network contains two partitions. The lexeme partition is shown on the left, with nodes for three nouns. The other partition is shown on the right; nodes are combinations of exponents and morphosyntactic properties. Edges (lines) connect nodes across the two partitions.