

Web-based system for distant learning on neural networks and distributed systems

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Structure of presentation

- What is distant learning (DL)
- Drawbacks of current DL systems
- The “Edia” project
- Neural networks course
- Distributed systems course
- Conclusion

What is distant learning

Distant learning (DL) is such an organization of educational process, when tutors and students may be physically distant from each other.

Why distant learning

Limitations of traditional education:

- Cost limitations
- Time limitations
- Low accessibility of rare courses
- Limited “transfer rate” of faculties

Moreover:

- Increasing popularity of high education
- Fast progress of informational technologies

Advantages of distant learning

- *Flexibility* – learn as much as you need
- *Parallelism* – learn and work simultaneously
- *Remoteness* – learn wherever you are
- *Asynchronous* – learn with your own timetable
- *Wide range* – student count is almost unlimited
- *Low cost* – DL is in general 10-50% cheaper than classical learning

General structure of DL system

Distant learning system

Informational system
(Electronic textbook)

Knowledge
testing system

Drawbacks of current DL system

Most developers do pay much of their attention to knowledge testing system, while informational system is often left quite primitive:

- Bad material layout
- Inconvenient navigation
- No search ability (!)

EdiV

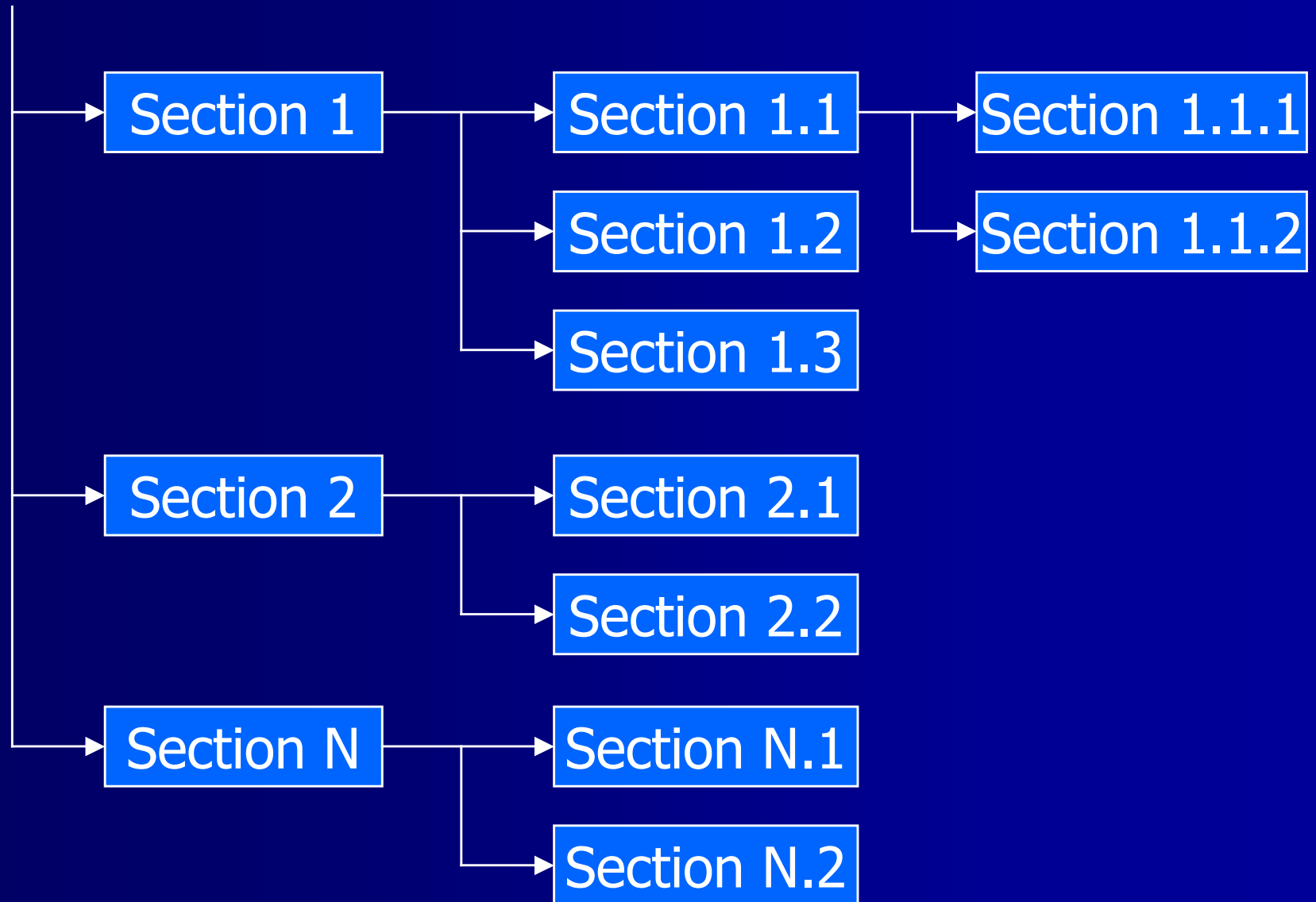
The "Edia" project

EdiV

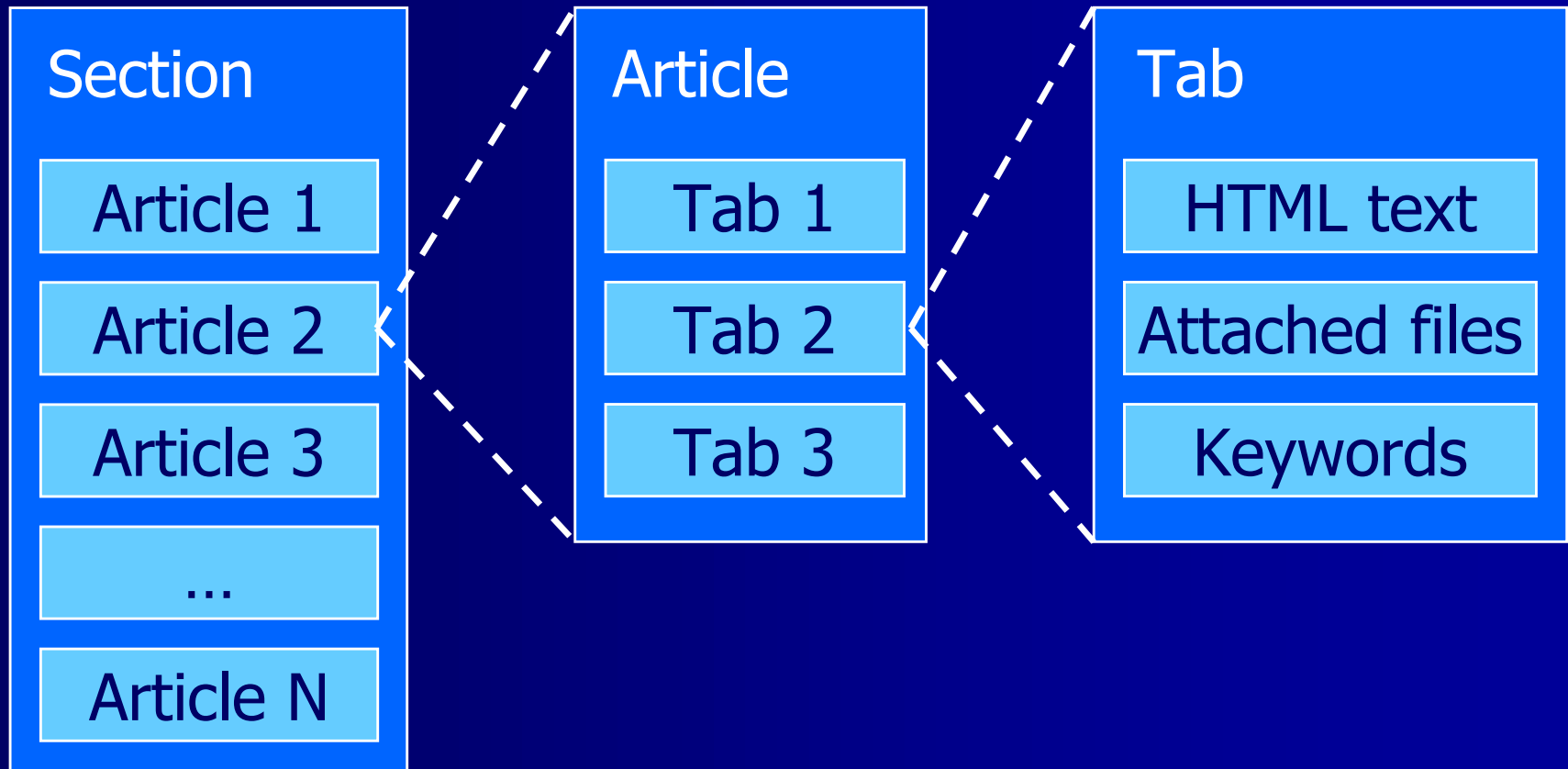
The "Edia" project

- Informational articles are arranged in hierarchy of sections
- In-article structure: the tab concept
- Inline multimedia (file attachments)
- Keywords support
- Three means to find what you need:
 - View sections
 - Ordinary search
 - Glossary search

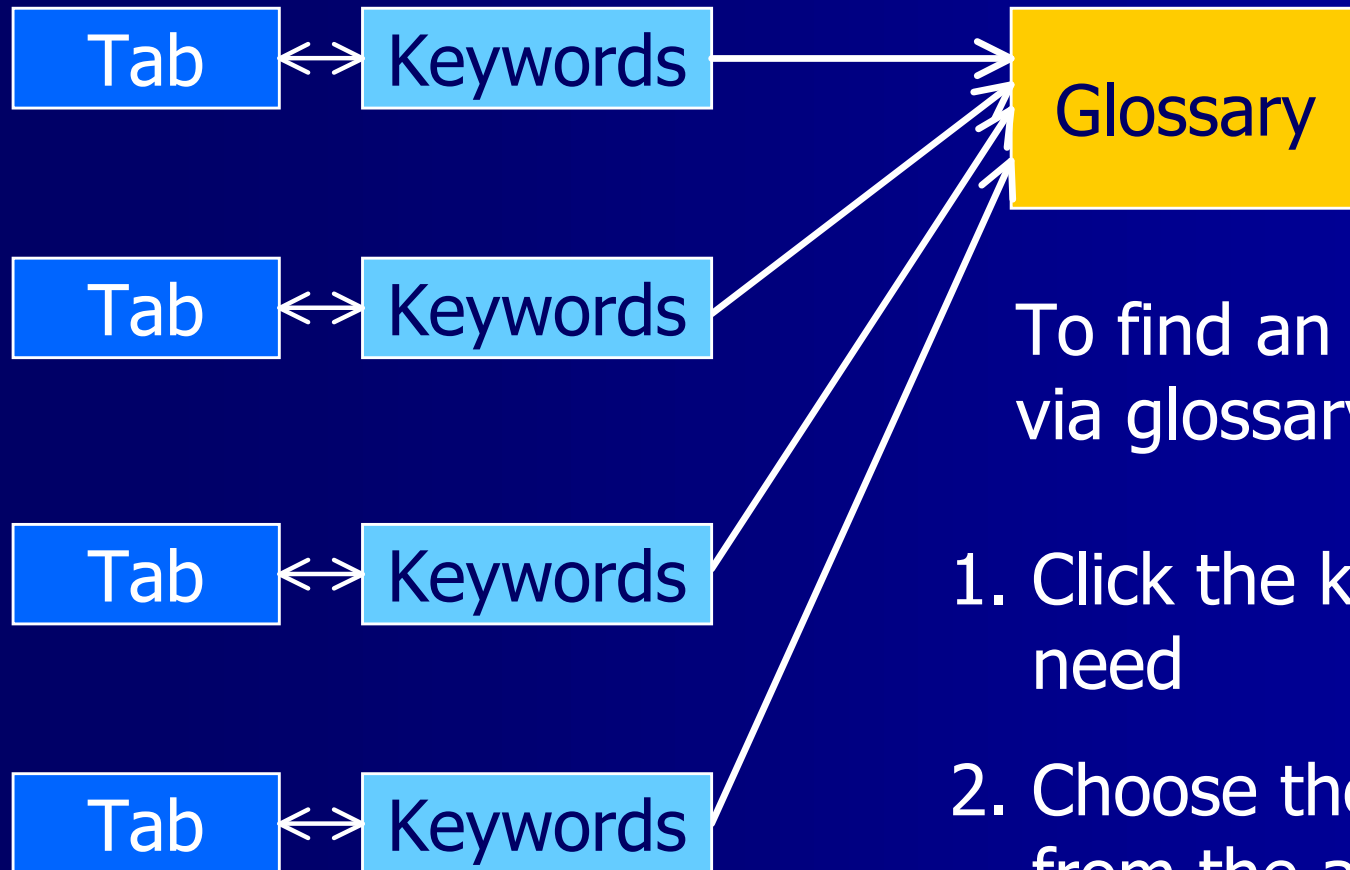
The "Edia" project



The "Edia" project



The "Edia" project



To find an article
via glossary:

1. Click the keyword you need
2. Choose the article from the appeared list

Neural networks course

- Theory of artificial neural networks (ANN)
 - Biological and artificial neuron
 - Applications of feed-forward ANNs
 - ANNs with feedback and lateral connections
- Special attention given to practical aspects of ANN application
- Lectures are combined with interactive demos (Java-applets)

Distributed systems course

Theory and applications of distributed systems:

- Parallel computing overview
- Cluster technologies
- OpenMP standard
- MPI and MPICH standards

Conclusion

The project is constantly developing.

- Informational system (Edia) is complete (binaries are available upon request)
- A knowledge testing system is under development now

Most recent information available here:

<http://sstcenter.com/dsa/edia.html>

Acknowledgements

We would like to thank:

- Sergei A. Malyshev

Chairman of Belarusian Section of IEEE

- Vladimir V. Apanasovich

- Vladimir M. Lutkovski

Radio Physics and Electronics Faculty

- Igor N. Blinov

Faculty of Applied Mathematics and Informatics

Thank you