Translation of Time Expressions with NooJ

Tamás Váradi

Hungarian Academy of Sciences
varadi@nytud.hu

NooJ 2008 Conference
Budapest 8 June, 2007
Outline

1. Motivation
2. Scope
3. Resources
4. Approaches
5. Conclusion
Outline

1. Motivation
2. Scope
3. Resources
4. Approaches
5. Conclusion
Outline

1. Motivation
2. Scope
3. Resources
4. Approaches
5. Conclusion
Motivation

Double agenda

- The MT problem
- The NooJ mission
  - A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation

Double agenda

- The MT problem
- The NooJ mission
  - A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation

Double agenda

- The MT problem
- The NooJ mission
  - A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation

Double agenda

- The MT problem
- The NooJ mission
  
  A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation

Double agenda

- The MT problem
- The NooJ mission
  - A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation

Double agenda

- The MT problem
- The NooJ mission
  - A community of users producing and sharing resources

How far are NooJ resources reusable across languages?
Motivation
Scope
Resources
Approaches
Conclusion

Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging

- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Motivation
Scope
Resources
Approaches
Conclusion

Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Motivation
Scope
Resources
Approaches
Conclusion

Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging

- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Scope

Time expressions

- Great practical interest
  - information extraction
  - semantic tagging
- Suitable structure
  - manageable scope
  - open and closed lexical items
  - highly conventionalized structure
  - semantically universal concepts involved
Scope

Time expressions

Great practical interest
- information extraction
- semantic tagging

Suitable structure
- manageable scope
- open and closed lexical items
- highly conventionalized structure
- semantically universal concepts involved
Resources

- Bilingual dictionaries
- Local grammars

Functionalities

- Use of variables
- Lexical constraints
- Lexical features
Resources

- Bilingual dictionaries
- Local grammars

Functionalities

- Use of variables
- Lexical constraints
- Lexical features
Resources

- Bilingual dictionaries
- Local grammars

Functionalities

- Use of variables
- Lexical constraints
- Lexical features
# Resources

- Bilingual dictionaries
- Local grammars

## Functionalities

- Use of variables
- Lexical constraints
- Lexical features
## Resources

- Bilingual dictionaries
- Local grammars

## Functionalities

- Use of variables
  - lexical constraints
  - lexical features
## Resources

- Bilingual dictionaries
- Local grammars

## Functionalities

- Use of variables
- Lexical constraints
  - Lexical features
## Resources

- Bilingual dictionaries
- Local grammars

## Functionalities

- Use of variables
- Lexical constraints
- Lexical features
Approaches

- Target language items ‘hard-wired’ in local graphs
- Target language items selected by semantic features
  - features assigned by syntactic graphs
  - features assigned in the lexicon
Approaches

- Target language items ‘hard-wired’ in local graphs
- Target language items selected by semantic features
  - features assigned by syntactic graphs
  - features assigned in the lexicon
Approaches

- Target language items ‘hard-wired’ in local graphs
- Target language items selected by semantic features
  - features assigned by syntactic graphs
  - features assigned in the lexicon
Approaches

- Target language items ‘hard-wired’ in local graphs
- Target language items selected by semantic features
  - features assigned by syntactic graphs
  - features assigned in the lexicon
Conclusions

- Reuse of resources is possible even across widely different languages
- Cost depends on the linguistic problem involved
- Dates, named entities and similar fixed expressions are best candidates
- Even so, "some" work is required to adjust the resources
Conclusions

- Reuse of resources is possible even across widely different languages
- Cost depends on the linguistic problem involved
  - Dates, named entities and similar fixed expressions are best candidates
  - Even so, "some" work is required to adjust the resources
Conclusions

- Reuse of resources is possible even across widely different languages
- Cost depends on the linguistic problem involved
- Dates, named entities and similar fixed expressions are best candidates
- Even so, "some" work is required to adjust the resources
Conclusions

- Reuse of resources is possible even across widely different languages
- Cost depends on the linguistic problem involved
- Dates, named entities and similar fixed expressions are best candidates
- Even so, "some" work is required to adjust the resources
Thank you for your attention!