

Augmenting Online Conversation through Automated Discourse Tagging

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Overview

- Discourse functions and devices, theory applied
- Spark, a messaging architecture
- Video
- Testing of Spark's advantages
- Questions?

Discourse functions and devices

- Discourse functions dictate the intent/content of communication
- Discourse devices are the means to carry out this intent
- Text chat lacks a lot of discourse devices
- Reinvent missing devices, e.g. with Spark

Discourse functions

- Interactional, make sure that the conversation goes on accordingly with what the producers want
- Transactional, "the pool of shared knowledge"
- Grounding
- Mapping to a computable model:
Discourse model, entities and structure
Rhetic: I come **in peace**

Discourse Devices

- Getting and acknowledging attention with visual cues
- To transmit something rhematic, intonation
- Grounding with a nod
- Producing discourse structure transitions with body language

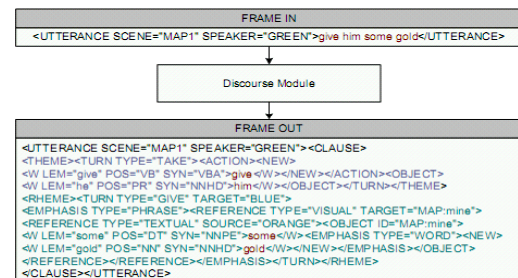
Discourse devices, reloaded

- Text only chat is a recipe for misunderstanding, webcams suck
- Avatars, virtual bodies to the rescue
- Use good gaze control
- How about automated nodding and appropriate handwaving as well?

Spark

- Architecture to automatically diagnose and transform simple chat text to markup with discourse information
- Discourse markup transformed to behavioural markup
- Behavioural markup interpreted to direct an avatar

Markup example



Spark components

- Discourse module
 - POS with EngLite tagger
 - Finds lemma (root) of each word
 - Head phrase (noun or verb) and head phrase modifier identification
- Discourse context database
- Avatar program

Video



Testing

- Empirical
- Objectively, time measured to finish task
- Subjectively from questions answered by participants
- Success!

Questions?