

The French CREGEST Project

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Objectives

1/ Corpus building

A large scale undertaking (500 h / 250 signers)

designed to complement existing corpora of LSF and natural gestural languages (see Sallandre & Braffort 2009)

2/ Linguistic modeling

Better understand the processes at work in the emergence, semiotization and stabilization of meaningful human gestuality
= Refining the semiogenesis hypothesis grounding the *Semiological Model* (Cuxac 2000)

LSF acquisition by deaf children : a study of motion events

Context: The purpose of this study is to collect free and induced LSF production of children.
Informants: 54 deaf children, aged 3 to 11 years, born to hearing or deaf parents and attending different educational settings.
Topic: How to express manner and path in motion events, with stimuli by Hickmann *et al.* 2008 (26 video items).
Case study of 2 native deaf signers both 8 years old and 1 Deaf adult (out of 15 children and 5 adults video-taped).

First results (Sallandre *et al.* 2010) :

- 2 main structures are used, and very few lexical signs :
 - personal transfer (PT) : role shift, internal viewpoint of the character
 - situational transfer (ST) : external viewpoint, a whole view on the scene

2) These 2 structures express both manner and path but with a **different focus** :

- personal transfer : focus on **manner**
- situational transfer : focus on **manner + path** simultaneously

3) Some « **patterns** » with 2 structures emerged in LSF (but only 1 verb in French, for hearing children). [See examples](#) ☐



Item "to skate", screenshot



PT « slip » + ST « slip on the frozen lake »



PT "skate" + PT "slip"



Transfer Structures and Lexical Signs

Adult deaf signers (LSF) : Processes of lexicogenesis

Corpus

80 semi-directed interviews of 90 min. each (4 deaf interviewers from 4 different regions / 80 informants aged 20-55):
1. Collection of relatively stabilized emergent lexical signs in discourse (varying); 2. metalinguistic discussion of the signs produced (stimuli); 3. free discussion

Objectives

1. Characterize the lexicogenetic procedures; what are the components, the structures of compositionality, the nature and hierarchy of constraints leading to stabilization?

- Identify recurrent compositional structures (lexicogenetic matrices)
- Among these, evaluate the role of components and compositional structures identical to those identified in transfer units (Cuxac 2000).
- Analyze the modalities of integration of loans from the dominant oral language (= integrative conditions of components of dactylogological units)

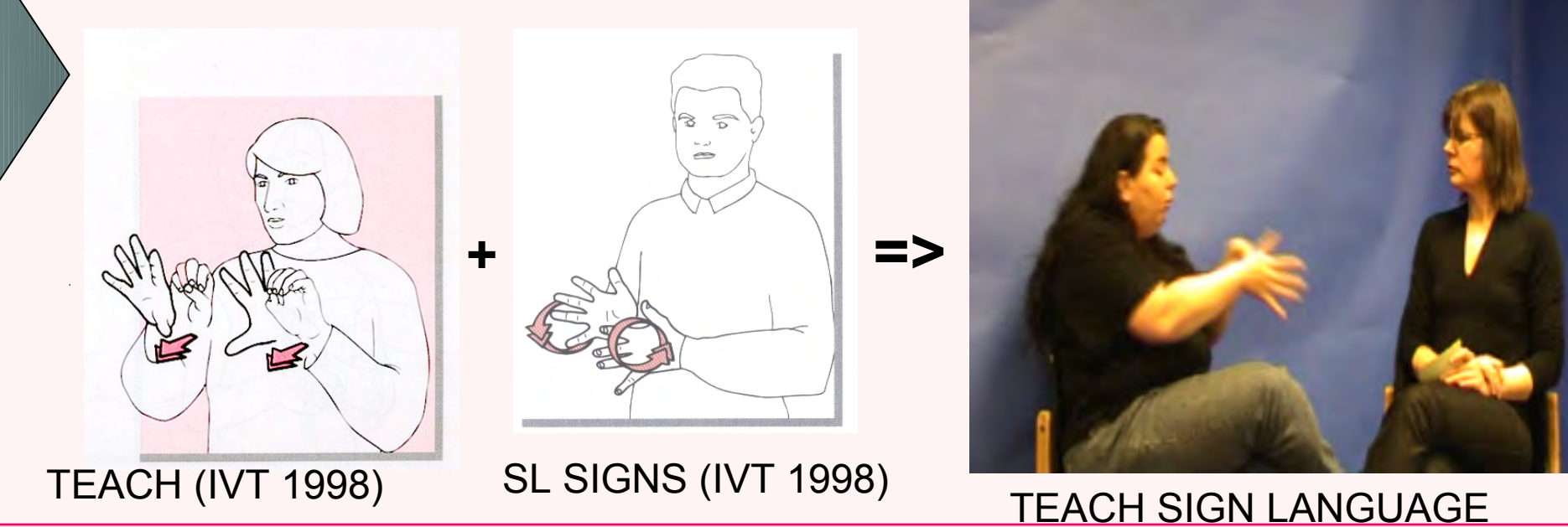
2. Examine units with lexical status in SL: conventional sign? Infra-sign morphemic component? Bi-/tri-morphemic radical?

Initial observations

(Garcia & Perini 2010, Garcia 2010)

1. Strong recurrence of 2 compositional processes: : a) portmanteau words; b) the creation of a sign through modification of components of pre-existing signs.
2. Components of dactylogological units = integral morphemic components: a) Integration with iconic rationale; b) Integration of pre-existing lexicogenetic matrices (vs. finger-spelling, vs. a simple current 'initialization' process) like all components + commutation with other types of components.

A portmanteau word



The creation of a sign through modification of components of pre-existing signs / Integration of a component of dactylogological unit with iconic rationale

H dactylogological unit handshape



Mixed hearing/deaf pairs

- How to annotate gestures and SL simultaneously?
- What level to annotate – phonetic, semantic?
- Based on which formalism – SL/Gestuality notation system?

Technical resolution between choices of notation

- Annotate based on a common basis.
- Access to meaning during the discourse.
- Choice of physiological level.
- Automatic enrichment of annotation

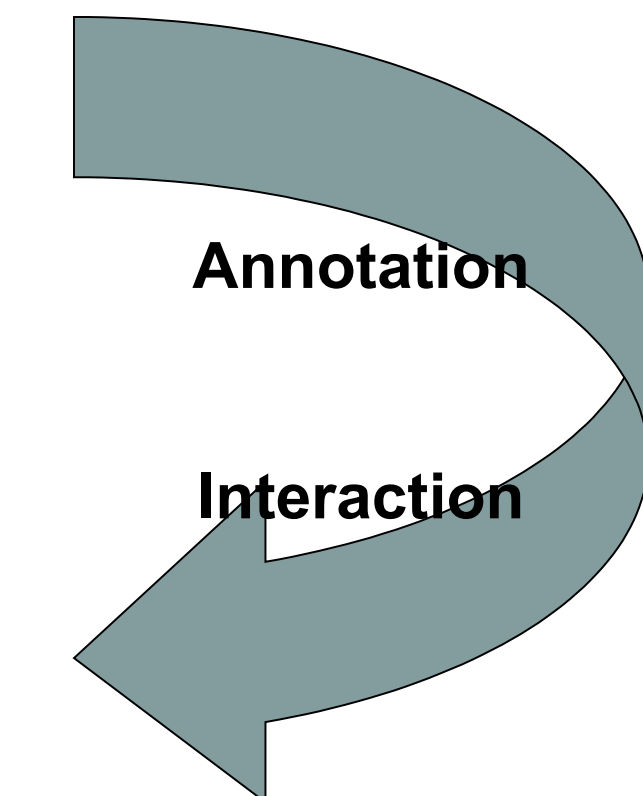
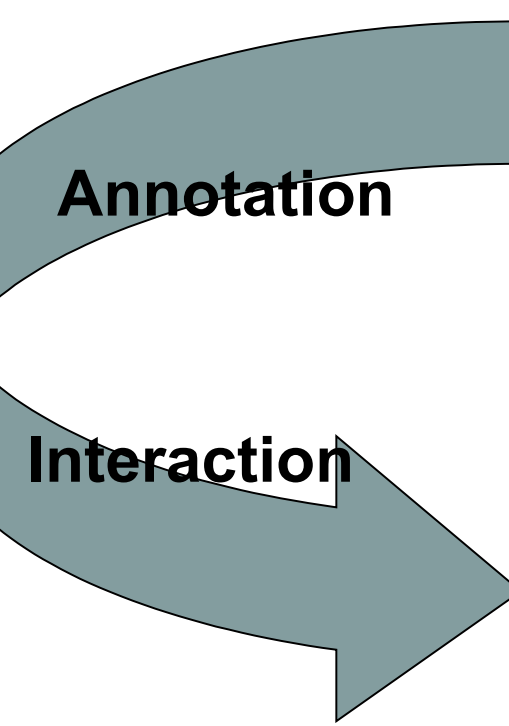
1. Recordings

Physiological annotation: positions of segments of human gestuality

2. Annotations through ELAN

Successive Imports/exports in a spreadsheet (Excel)

3. Transformations of positions during movement
4. Identification of patterns of action in each segment
5. Identification of movement transfers between the segments > emergence of units

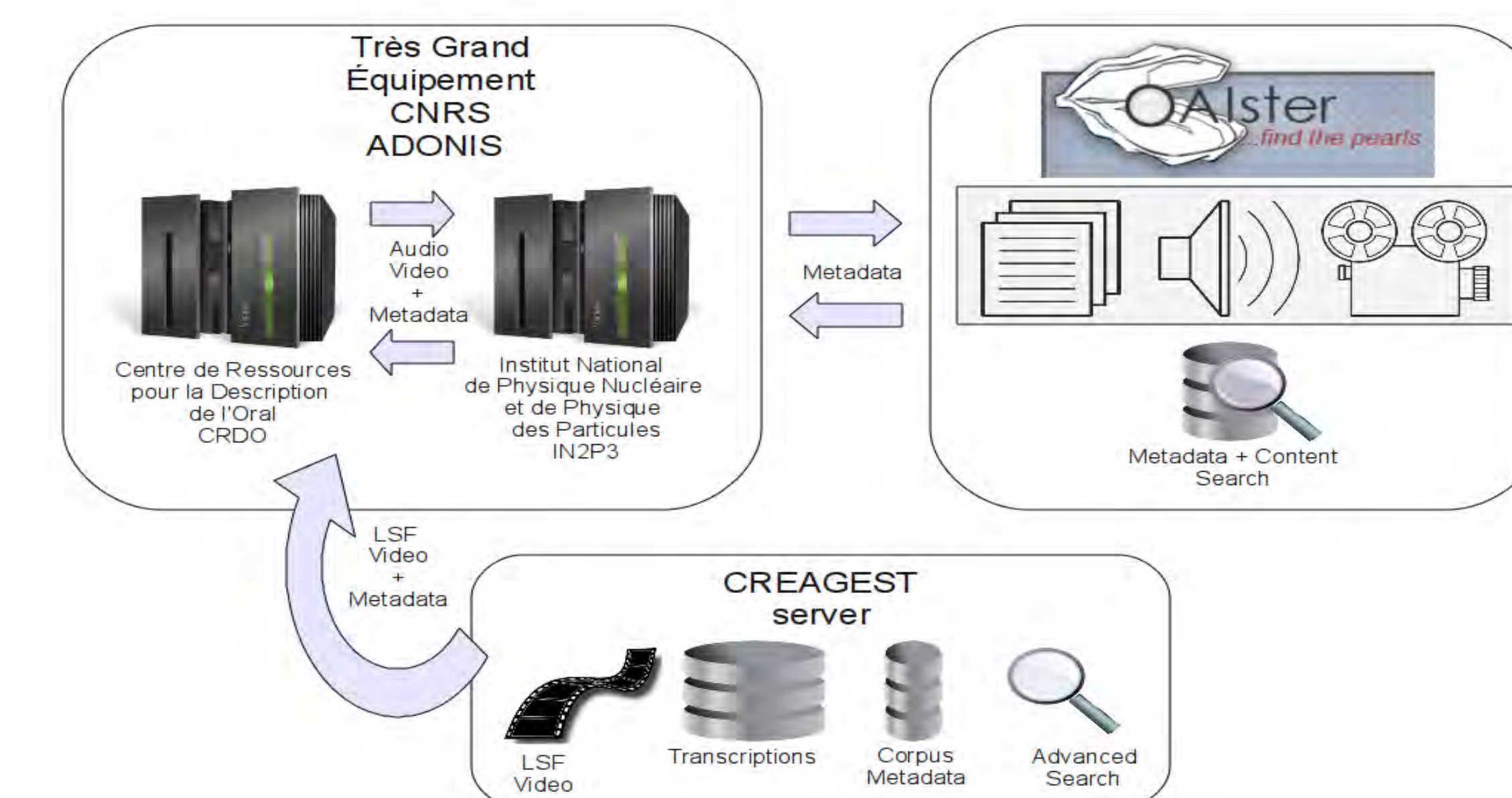


Issues:

- Provide long term (>20 years): storage, reformatting and access to digitized corpora
- Distribute searchable LSF "texts"
- Adopt open & international standards : OLAC
- => support corpus-based research in Sign Languages

Solutions:

- CRDO & IN2P3 provide long-term archiving + computing power for reformatting, distribution and search of the corpora
- Metadata and video are indexed and searchable via the OAlster interface
- The CREGEST server provides advanced search features, based on multi-tiered transcriptions



Editing workflow

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