

PoC EF-SUCRE S012



Context: Progress towards system autonomy

Need: Virtual Assistant for Translation Chain Automation (voice > text > intention > concept)

Problem addressed: Monitoring good understanding: syntactic, semantic and pragmatic



70 K



36
months



4
deliverables

4 deliverables

Nov 2020 : Synthesis report on the criteria for evaluating comprehension and expression in terms of criteria that can be interpreted by software: OK

Dec 2020 : Software brick with implemented criteria: NA

Jan 2021: Report on the evaluation of the comprehension criteria on the use case of ATC requests: To be continued...

Feb 2021 : Simulator/software used for this evaluation : To be continued...

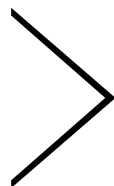
- Ensure the transition from natural language to system-usable concepts
- Use Case: ATC Communication

Technical approach.

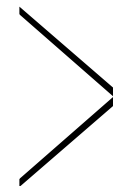


- State of the art on criteria and metrics of understanding in NLP/NLU
- Data formalization
- Link with Cognitive Agents (CA)
- Knowledge bases (KB / ontologies)
- Implementation in an ATC request simulator

**Proposal of a formal
definition of
understanding**

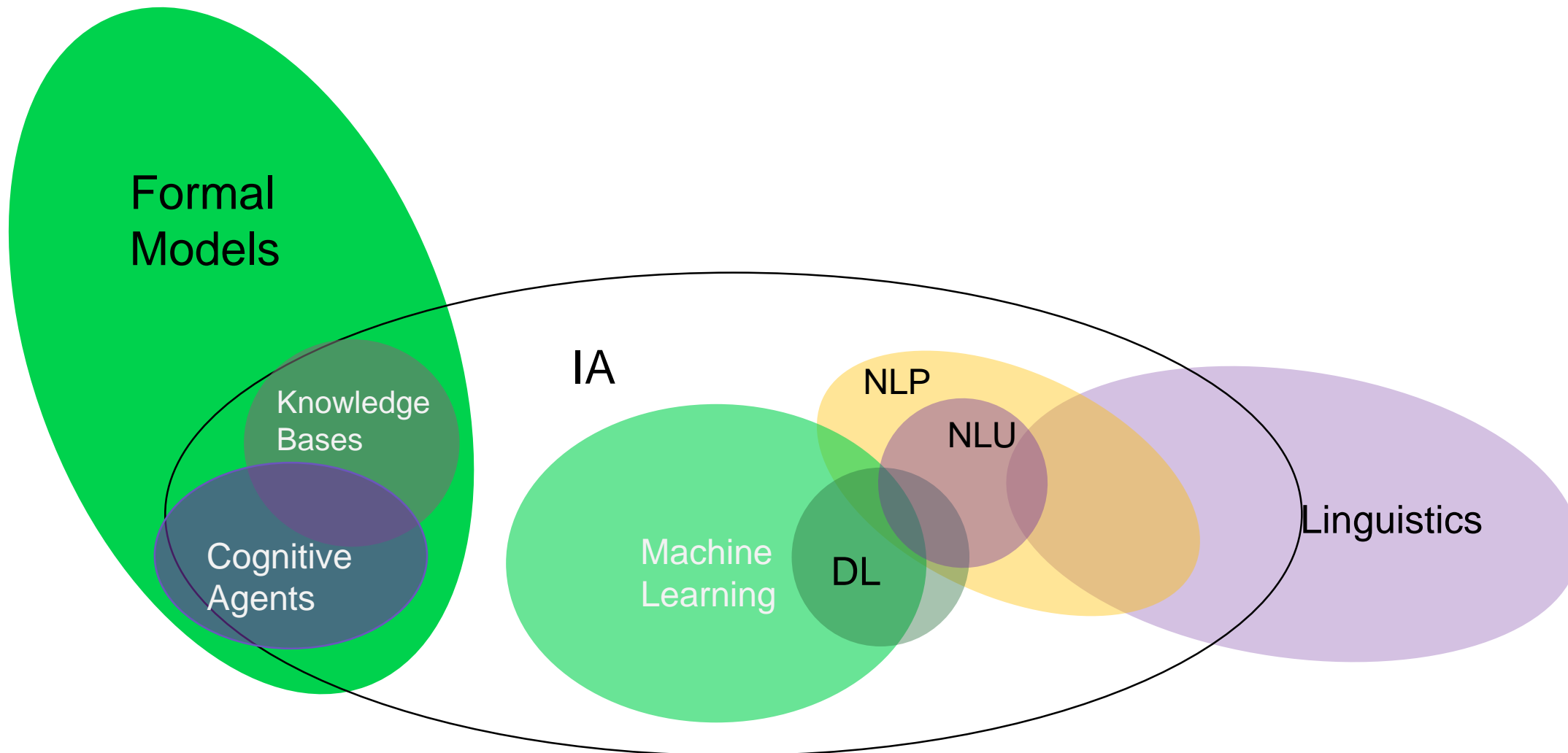


**Define the algorithm
to verify that the
execution of the
query is possible**



**Experimentation in
a representative
and integrated
context**

Approche technique.



SU(CRE)ITE Opening perspective



- Assistance in legal tasks (examples: Build an automatic response to a proposal. Automatically fill a legal documents according to a concret case) Evaluation of purchasing documents (example: is this standard form contract compliant with our company's policies?).
- Search for the cause of a failure on a test bench (example: look for information in the log file showing a difference between the recorded voltages and current on Friday from 1 to 2AM and on Saturday from 1 to 2AM when the device under test failed. Detect inconsistency in log files and build a model of the corresponding context to explain failure source).
- Assistance in email writing : HR recruiting tasks, write decent email from raw reaction exemple "No you are too late but your resumé is interesting stay tuned"
- Assistance when analyzing multimodal data (example: look for lakes in this satellite picture that are located near a hotel, using our database of available hotels. Book a kite surf trip in april wherever).
- Assistance when developing computer code (example: improve this reference code computing the average of two bytes without using more than 8 bit variables).
- Assistance when developing a new revision of hardware (example: modify the technical specifications of the embedded computer so as to switch the FPGA to a model with half the logic blocks)
- Assistance when analyzing multimodal data (example: look for lakes in this satellite picture that are located near a hotel, using our database of available hotels. Book a kite surf trip in april wherever).