



# ASML

## REQUIREMENTS/SPECIFICATIONS

[www.requirementsassistant.nl](http://www.requirementsassistant.nl)

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# MY BACKGROUND

- AIRFORCE
- NATO
- STC
- HUGHES AIRCRAFT
- SIGNAAL-THOMSON/THALES
- SUNNY HILLS CONSULTANCY



# SCENARIO



# WHAT IS AVAILABLE?

- TEXT
- WRITTEN TEXT
- NATURAL LANGUAGE
  - e.g. ENGLISH (FRENCH, GERMAN)
  
- A REQUIREMENT IS A QUALITY OR CONDITION THAT MATTERS TO SOMEONE WHO MATTERS. :-)

# ASPECTS for REVIEW

- GRAMMAR
- PARAGRAPH
- SENTENCE
- QUANTIFIER
- AMBIGUITY, prepositions
- DISCOURSE



# ASSUMPTIONS

- COMPLEX SYSTEM
- PROJECT
- NATURAL LANGUAGE

# WHAT DO WE WANT?

- COMPLETE
- CONSISTENT
- NOT-AMBIGUOUS
- NOT-VAGUE

# PURPOSE

- SET DIRECTION
- DEFINE
- ALLOW



# IMPROVEMENTS

- MIL STD (NASA) 490
- CHECKLISTS
- CASE
- FORMAL LANGUAGES (Z, LOTOS, etc)
- PREF TEXTS

# WHERE IS HELP?

- SYSTEM ENGINEERING
- SOFTWARE ENGINEERING
- PROJECT MANAGEMENT
- AI:
  - NATURAL LANGUAGE PROCESSING
  - NATURAL LANGUAGE UNDERSTANDING
  - DISCOURSE UNDERSTANDING

# UNDERSTANDING

- WRITTEN TEXT
- FOREIGN LANGUAGE
- NATURAL LANGUAGE
  - EXAMPLE: AMBIGUITY

# EMPHASIS

- EXAMPLE:
- THE EXCEPTIONAL INPUTS ARE HANDLED BY THE TERMINAL OPERATOR.

# QUANTIFIER

- EXAMPLE:
- A RIVER RUNS THROUGH EVERY EUROPEAN COUNTRY.
  
- EXAMPLE:
- ALL THE STUDENTS HAVE NOT SOLVED A PROBLEM.

# VAGUE REFERENCES

- EXAMPLE:
- WHICH PROGRAMMERS ARE IN DIVISION 4111 AND 4361?

# MY TOOL

- PROLOG LANGUAGE
- PARSING
- ACCEPT NATURAL LANGUAGE AS AN INPUT
- HOME FOR LESSONS LEARNED
  - DURING REVIEWS
  - FROM UT-LIBRARY

# SUMMARY

- LIMITED LEAD-TIME
- IS REVIEWING INTERESTING?
- USUALLY ON TOP OF OTHER JOBS
- A FAST TOOL DRIVES BETTER REQUIREMENTS.