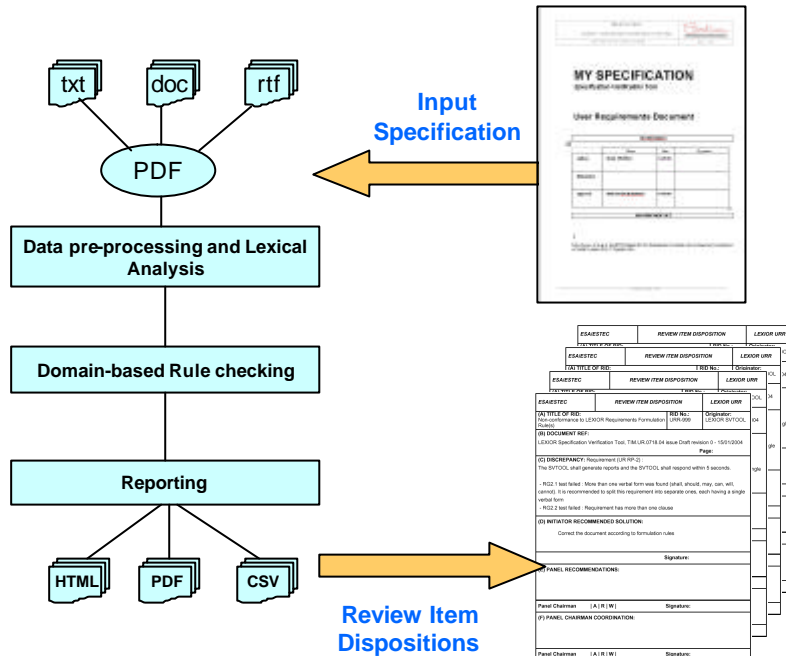


## - PRODUCT SHEET -

**OBJECTIVE** : LEXical analysis for Improvement Of Requirements. The objective is to provide a means for improving requirements documents using internet technologies applied to the domain of lexical analysis.



### PRINCIPLES :

The LEXIOR application has been developed to support the improvement of requirements documents.

The tool provides the following capabilities:

- Data pre-processing enabling the handling of multiple input document formats (xml, pdf, doc, txt, ps)
- Lexical Analysis of each textual requirement using Natural Language Processing techniques.
- Domain-based rule checking for a variety of general requirements formulation rules.
- Interactive mode enabling requirements engineers to validate requirements as they are writing their requirements documents or for trainers to demonstrate requirements best practices.
- Batch mode enabling complete requirements documents validation.
- Automatic generation of analysis reports in pdf file format for immediate use in a formal review process.

Current limitations are:

- Textual requirements only are handled. The tool does not currently have the capability to extract requirements from diagrams or image formats such as gif, jpeg, png, etc.
- Requirements are recognisable by some form of criterion such as an identifier (e.g. **'UR01 The system shall respond'**, in this case the requirements can be identified by the prefix **"UR01"**).

### APPLICATIONS :

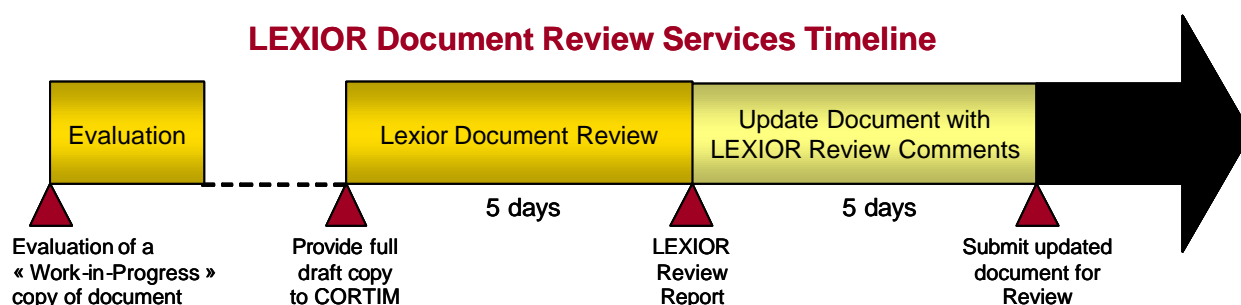
This kind of tool can be used for various application purposes such as :

- **Document Review Support** as an integral part of a formal document review cycle. If a Requirements document is processed one week before the Data Package delivery, it is possible to reformulate the most unclear or the most ambiguous requirements to submit an updated document to the formal review process. This enables the reviewer to concentrate on verifying the other "value-added aspects not checked by the tool, such as determining whether the system is really "fit-for-intended-purpose".

- **Requirements Formulation Training Support.** Writing requirements documents demands a combination of analytical, engineering and communication skills. The formulation of requirements in accordance with established best practices should start with basic training sessions. Lexior has been developed in association with ECSS-E10 Working Group Members' recommended best practices and forms an excellent basis for animated training sessions for actors at all industrial levels.
- **Integration with existing requirements and document management systems.** While there are many tools that enable requirements and document management tasks such as traceability, configuration management and formulation, there are very few tools that enable validation of requirements **content**. LEXIOR can be integrated with external tools such as Telelogic DOORS®, Rational Requisite Pro®, or even Microsoft Word® to enable efficient requirements validation as part of the requirements or document management workflow.
- **Further Development of Best Practice Rules.** The current state of the LEXIOR application is a solid platform upon which extensions for more specific kinds of rules such as interface, performance and operational requirements can be built.
- **Support to Specification Translation Tasks.** As the English language is becoming increasingly used as the common language currency for international projects, translation services are requested to convert existing documents written in other languages to English. LEXIOR can be used as a complementary tool to standard translation services to ensure requirements documents are not only correctly translated, but the requirements are correctly formulated. CORTIM can offer an integrated specification translation/formulation package.

#### PROPOSED SCENARIO FOR DOCUMENT REVIEW SUPPORT :

The timeline below provides the proposed service scenario for LEXIOR document review services.



- During the weeks leading to the review, the Contractor sends a “work-in-progress” copy of the specification to CORTIM for a free evaluation study including sample test and fixed-price service assessment for the complete document. Note that CORTIM guarantees the confidentiality and non-disclosure of any information provided by our customers.
- Upon agreement of the CORTIM assessment, the Contractor sends a draft of the specification to CORTIM **two weeks** before submitting it to the formal review process.
- CORTIM reviews the document and sends within **5 working days** (1 calendar week) the review report with the top 50 RIDs back to the Contractor.
- The Contractor then has the **5 remaining working days** (1 calendar week) to update the document to take the modifications highlighted in the LEXIOR Review Report into account and then submit it to the Formal Review Cycle.

#### CONTACT :

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