

RAT - AUTHORIZING TOOL

Add-in and web browser extension



THE
REUSE
COMPANY

A SMARTER WAY TO AUTHOR ENGINEERING ITEMS



ABOUT

While traversing the **System Life Cycle**, engineers produce thousands of engineering items; most of them are abstract work products (requirements, models, architectures, test cases, manuals, risks, etc.), defined to achieve a system and its composed elements.

RAT – AUTHORIZING Tool is the ideal way to help engineers create different types of artifacts. It helps authors during the demanding process of **composing requirement statements or other documentation**, hence improving the overall quality of the projects.

RAT – AUTHORIZING Tool is the perfect assistant for system analysts/ engineers when writing the system documentation or creating models. RAT leads engineers with a **set of agreed-upon patterns**, suggests the most suitable content for each piece of written information, and always ensures the use of **correct syntax**. RAT also provides **real-time quality checking** of the items that are being created. Therefore, RAT frees engineers from format concerns (e.g., structure of requirements) allowing them to focus on the engineering decisions: that is, engineers and RAT tool team up to improve the overall quality of your projects.



QUALITY

RAT – AUTHORIZING Tool provides real-time quality guidelines when creating new engineering items. **Best practices, checklists, or rules**, such as the INCOSE Guide to Writing Requirements or the EARS patterns, are now closer to system engineers.



TIME

The concept “**Get it right the first time**” can now be applied to requirements, test cases, and other document writings... RAT allows a significant reduction of verification loops at different levels (Stakeholder, System, subsystem, component).



MONEY

Focusing on requirements quality from the very beginning helps reduce rework and subsequent costs.

REAL-TIME QUALITY CHECKING

Based on the catalog of rules and metrics established using the RQA – QUALITY Studio (INCOSE, NASA, ECSS...)

PATTERN- BASED WRITING

Choose a particular pattern from a preset library of patterns (EARS patterns, Sophist, ECSS...) and easily follow the different slots comprising to a well-formed requirement of the selected type (Functional, Non-Functional, Safety...).

CONNECTION TO CONTROLLED VOCABULARY

Either managed in KM – KNOWLEDGE Manager or using the concepts that you have established in your models.

CONSISTENCY CHECK

To ensure, in real-time, that your requirement is consistent with other requirements in the same document, in other documents, or even with your models.

DETECTION OF OVERLAPPED REQUIREMENTS

With the help of our semantic engine, identify similar requirements to avoid contradictory or redundant statements in your specification.

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CORRECTNESS, COMPLETENESS, CONSISTENCY

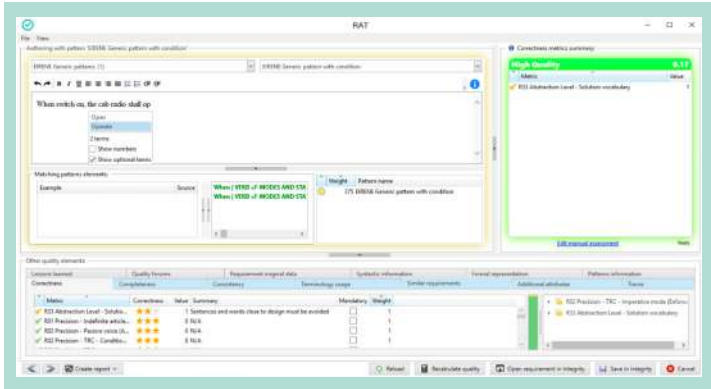
For a **textual artifact**, once a pattern has been selected, **RAT - AUTHORIZING Tool** shows its structure, its description and examples of how it should be used. Authors just need to select the right terms and semantics from a controlled vocabulary which is suggested while typing, thus ensuring that the developed requirement, or any other artifact, has followed the right syntax and it provides the proper information.

RAT - AUTHORIZING Tool implements a smart way of writing – a technique that guides authors while writing – thus providing an accurate way of creating consistent requirements and speeding up system documentation writing.

Applying this methodology to requirements engineering provides several benefits:

- Both humans and computers will read and understand textual artifacts more easily without ambiguity (**Correctness**).
- The chances of writing redundant and contradictory content are decreased (**Consistency**).
- Homogeneous vocabulary and grammar across multiple documents improve the consistency of the whole project (**Requirements patterns**).
- A Semantic Engine “understands” the information stated in a single way

The information reported by **RAT - AUTHORIZING Tool** includes out-of-the-box quality metrics for the detection of inconsistency, ambiguity, duplicated items. The **real-time quality assessment**, as well as the **IntelliSense @ writing assistant**, are both included as plug-ins on top of the major tools for requirements management, risk or testcase management, modelling tools, simulation tools...



MEASURE THE QUALITY OF REQUIREMENTS, MODELS AND ARTIFACTS IN REAL-TIME

RAT - AUTHORIZING Tool provides **quality feedback** (based on the rules and metrics assigned in the RQA – QUALITY Studio) in **real-time** and highlights defects in the requirement. This reduces the time needed for manual quality inspection, peer review, and double-checking while boosting the quality of engineering items.

All the **patterns** offered by **RAT - AUTHORIZING Tool** and all the quality metrics checked must be **previously defined** in RQA – QUALITY Studio, ensuring that all the authors, who are collaborating on the same document or model, follow the same rules.

RAT - AUTHORIZING Tool can also notify users, in real-time, about the lack of consistency between the currently edited engineering item and others in the same document/project.

PATTERNS CUSTOMIZATION

RAT - AUTHORIZING Tool uses a customizable set of textual patterns, which can be easily tailored and managed using the **KM – KNOWLEDGE Manager**.

RAT - AUTHORIZING Tool users can benefit from an easy-to-use feature to suggest new patterns or suggest changes to existing ones. The tool notifies the knowledge architects, who may accept or reject suggested changes to the Knowledge Base, all of this using the **KM – KNOWLEDGE Management tool**.

REQUIREMENTS AUTHORIZING WITHIN MODELS

When **RAT - AUTHORIZING Tool** is used inside a modeling tool (Capella for example) its advantages increase: You can write requirements following the **name conventions** of the different model elements, **generate links automatically between model elements and requirements**, and you can **synchronize the requirements** with your preferred Requirements Management tool.

AUTOMATIC IMPORT/EXPORT BETWEEN DIFFERENT SUPPORTED ENVIRONMENTS

RAT - AUTHORIZING Tool provides a round-trip mechanism that allows a seamless **transfer of engineering items to various tools**. To interoperate between different sources of information, e.g. requirements and models, it implements new OSLC specifications enabling the exchange of information regardless of its format or the tools used to create it.

RAT - AUTHORIZING TOOL'S CONNECTIVITY AND INTEGRATION

SES ENGINEERING Studio's RAT - AUTHORIZING Tool capability can be connected to a broad range of Systems Engineering tools, such as Requirements Management tools, ALMs, PLMs, MBSE and many more are yet to come! You can also develop your own connectors to **RAT - AUTHORIZING Tool** using our API.

50+ connectors



The available connectors for the **RAT - AUTHORIZING Tool Capability** are also detailed in the flyer of **SES ENGINEERING Studio**. More information on our website (scan the QR code!)

ADD-IN VERSION

Besides, **RAT - AUTHORIZING Tool** is available as a fully integrated add-in to some of the major Systems Engineering tools: **IBM Rational DOORS**, **PTC Windchill**, **Capella MBSE**, **IBM Rhapsody**, or **MS Office**.

WEB-BASED VERSION

RAT - AUTHORIZING Tool is also available as a web-browser extension, compatible with MS Edge, Google Chrome and Mozilla Firefox.

This extends the integration to web-based ALM and PLM platforms, such as **SIEMENS Polarion & Teamcenter**, **Codebeamer**, **JIRA**, **Atlassian Confluence**, etc.

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