

The Birds Project

# The libBirds Library, Software Requirements Standards

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# 1. Purpose of the SRS Document

This is a standard "Software Requirements Standards" document, corresponding to the guidelines in RTCA DO-178B. In the words of DO-178B, it defines "the methods, rules and tools to be used to develop the high-level requirements."

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# 2. Methods for Developing Software Requirements

Software requirements are developed using a software tool called **Do178Builder**.

**Do178Builder** allows the requirements to be developed in a structured manner, by presenting a series of questions (particularly relating to DO-178B) which the developer must answer. These data are stored in an outline structure, which begins with high-level requirements at the root of the outline, and expands to lower-level requirements, in more detailed outline levels, as the development effort proceeds.

# 3. Notations to Express Requirements

Requirements are expressed in common English, within the outline-structure context provided by the **Do178Builder** development tool.

# 4. Constraints on Requirements-Development Tools

The **Do178Builder** development tool provides a structured way of viewing the development effort, and of providing traceability, but:

1. It does not create high-level or derived requirements.
2. It does not perform coding.
3. It does not create test cases.

In other words, **Do178Builder** provides a means of organizing development data, but does not create any such data.

## 5. Method for Providing Derived Requirments

The **Do178Builder** development tool provides an outline structure for the development effort, in which high-level requirements expand to low-level requirements, which in turn expand to test cases. A single high-level requirement may expand to multiple low-level requirements.

Derived requirements are treated no differently than design data. They are simply lower-level outline elements broken out from the outline elements representing the high-level requirements. The outline organization directly provides traceability for the derived requirements.

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