

01 OBJECT MODEL

A MODULE IS A DATABASE, NOT A SPREADSHEET

THE THREE OBJECT KINDS	THREE NUMBERS — DON'T CONFUSE THEM	THE GRID IS A VIEW
<p>Heading Section title; scopes the objects below it and carries no <i>shall</i>.</p> <p>Requirement States something the system must do or be — the verifiable content.</p> <p>Information A note — rationale or source; set apart so it is never mistaken for a requirement.</p>	<p>OUTLINE Position under a heading (1, 2.1). Moves when objects are re-sorted.</p> <p>ABSOLUTE Permanent name, assigned once, never reused. Cite this one.</p> <p>IDENTIFIER The absolute number as text — e.g. SR-5.</p> <p>Why ids skip: a real module runs SR-2, SR-5, SR-9 — gaps mark objects that were deleted; their numbers retire permanently.</p>	<p>Every row is an object with a permanent identity and its own attributes — not a cell.</p> <p>The wide formal column carries heading and object text; it is simply the most common thing a view chooses to show. The data lives underneath, independent of how any one view displays it.</p>

02 NOTATION

ICONS · ARROWS · ROW MARKERS — READ THEM FIRST

DATABASE EXPLORER ICONS	LINK-COLUMN ARROWS	ROW MARKERS IN THE FORMAL COLUMN
<p>Project The top container; expands to its modules.</p> <p>Formal module A document of objects you read and edit.</p> <p>Link module Holds only connections — never object text.</p>	<p>Out-link Leaves this object — it is the source end.</p> <p>In-link Arrives here — this object is the target.</p> <p>Direction Always source → target.</p> <p>Suspect Source changed; coverage may be stale.</p> <p>Broken An endpoint was deleted; the link is gone.</p>	<p>H Heading Bold serif title — a section, not a requirement.</p> <p>¶ Object text The requirement body in the formal column.</p> <p>i Information Italic note — rationale, never verifiable.</p> <p>SR-n Identifier Absolute id in the gutter — cite this.</p>

03 ATTRIBUTES & TYPES

WHAT A COLUMN ACTUALLY STORES

SYSTEM VS. USER-DEFINED	TYPES & ENUMERATIONS	TWO QUIET PITFALLS
<p>System Built-in, maintained by DOORS — Object Heading, Object Text, absolute id, Created By / On. Mostly read-only.</p> <p>User Added per module for program data — Object Type, Verification Method, Status. Each has a declared type.</p>	<p>Types: Text, Integer, Real, Date, Boolean, Enumeration. An enumeration fixes a named set of values; assigning a value outside the set fails rather than coercing.</p> <p>MULTI-VALUE An enumeration can be flagged multi-valued — one object holds several values at once (Test + Analysis), which can quietly break a filter testing for one exact value.</p>	<p>EDITING AN ENUMERATION Each value carries a name <i>and</i> a hidden number. Renaming or reordering can silently change what stored objects mean; deleting a value still in use orphans those objects. Edit the type, never object-by-object.</p> <p>DEFAULT VALUES A blank you see may be the default, not a deliberate entry — an empty Verification Method means none was recorded, exactly the gap a review hunts.</p>

§ EXEMPLAR — A MODULE ON SCREEN

EXPLORER + FORMAL MODULE · DRAWN AT PRINT SCALE

DATABASE EXPLORER	01-UAS-System-Requirements - DOORS																					
<p>UAS PROJECT</p> <ul style="list-style-type: none"> 01-UAS-System-Requirements FORMAL 02-UAS-Subsystem-Requirements FORMAL 03-UAS-Interface-Requirements FORMAL LINK-Derived-From LINK LINK-Allocated-To LINK LINK-Verified-By LINK 	<p>VIEW: default</p> <table border="1"> <thead> <tr> <th>ID</th> <th>OBJECT TEXT</th> <th>LK</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Capabilities</td> <td></td> </tr> <tr> <td>SR-2</td> <td>Provide EO/IR imagery to the MCE, end-to-end latency ≤ 2 s.</td> <td>↗</td> </tr> <tr> <td>2</td> <td>Performance</td> <td></td> </tr> <tr> <td>SR-11</td> <td><i>Rationale — design cruise speed per propulsion memo.</i></td> <td></td> </tr> <tr> <td>SR-14</td> <td>Operate ≥ 150 km from the GCS (line of sight).</td> <td>↗</td> </tr> <tr> <td>SR-15</td> <td>With an airborne relay, operate ≥ 250 km.</td> <td>✓</td> </tr> </tbody> </table> <p>SR-n absolute id · never reused 1 / 2 outline no. · moves <i>italic</i> info object ↗ out-link ↙ in-link</p>	ID	OBJECT TEXT	LK	1	Capabilities		SR-2	Provide EO/IR imagery to the MCE, end-to-end latency ≤ 2 s.	↗	2	Performance		SR-11	<i>Rationale — design cruise speed per propulsion memo.</i>		SR-14	Operate ≥ 150 km from the GCS (line of sight).	↗	SR-15	With an airborne relay, operate ≥ 250 km.	✓
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04 VIEWS & FILTERS

THE DISPLAY IS CONFIGURABLE, THE DATA IS NOT

WHAT A VIEW STORES

A view = **columns + filter + sort + display**. Two engineers open the same module, see different columns, and neither display is wrong — the objects underneath are identical.

A column simply shows one attribute; adding or removing one changes the display, never the data.

FILTER ≠ DELETE

A "missing" requirement is usually filtered out; an attribute that "vanished" is just a hidden column.

The data has not moved — **only the view has**. Clear the filter and show all columns before you conclude anything is gone.

THE "SET AS DEFAULT VIEW" TRAP

Overwriting the default view pushes **your** filtered, narrowed display onto everyone who opens the module next.

A private experiment quietly becomes the program's shared starting screen. Save a named view of your own instead.

05 LINKS & TRACEABILITY

WHERE THE CONNECTION LIVES · COVERAGE IS STRUCTURAL

MODULE VS. LINK SET · DIRECTION

Link module Container for every link of one relationship type — **LINK-Derived-From**.

Link set The A→B pairing of two formal modules inside it. One module can hold several sets.

A link is **directed**: a derive link runs from the lower-level source to the higher-level target it derives from (SR-15 → SR-14). It lives in the link module, not in either object.

HOW LINKS BREAK OR TURN SUSPECT

Broken — delete either endpoint and the link drops from **both ends** silently; the link module loses the row.

Suspect — edit a **source** object's text and DOORS flags the link: its basis changed, so the target may no longer follow. The flag clears only when a human reviews it.

RTM — COVERAGE IS A LINK, NOT TEXT

Trace columns are **computed on open**: for each object they walk its links and show the identifiers on the other end (**Verified By**). Always live against current links.

Uncovered = carries no link of the required type. **Suspect** = a link exists, so the row reads "covered," but it is **stale** until reviewed.

06 BASELINES, HISTORY & COMPARE

WHAT DID THE REQUIREMENT SAY AT PDR?

A BASELINE IS IMMUTABLE **FILE** · **BASELINE** · **NEW**

A baseline is a **read-only snapshot** of a formal module at one instant — every object, attribute and value, frozen. Once taken it **never changes**; that is the entire point.

Numbered 1.0, 1.1... at each milestone, while the live **Current** version keeps moving. To defend **what SR-5 said at PDR**, open the PDR baseline — not the current module.

HISTORY VS. BASELINE VS. SET

History Automatic running log — who changed which attribute, from what to what, when. Answers **who / when**. **Tools** · **History**

Baseline Frozen full snapshot of **one module** at a chosen moment. Answers **what it said then**.

Baseline set Several linked modules baselined **together**, freezing the whole traceable tree as one coherent record (system → subsystem → verification).

WHAT COMPARE ACTUALLY DIFFS

Compare diffs two versions — usually **Current vs. a baseline**, or two baselines — and reports objects **added, deleted, and modified**, down to which attribute changed.

KEY It matches objects by **absolute number**, not row position — so re-sorting or moving an object is **not** a change. Only real content edits surface.

07 CROSS-MODULE REFERENCES & URL SCHEME

HOW AN OBJECT IS NAMED & REACHED FROM OUTSIDE

EVERY OBJECT HAS A URL **RIGHT-CLICK** · **COPY URL**

Right-click an object · **Copy URL** yields a **doors://** link that reopens **that exact object** — paste it into a Word doc, an email, a ticket, or another module's text.

`doors://host:36677/?_&uin=uzn:teleLogic::1-...-<module>-<object>`

The trailing object id makes it object-precise; drop it to point at the whole module.

PREFIXES MAKE A REFERENCE UNAMBIGUOUS

Each formal module defines an object-identifier **prefix** — **SR-**, **SUB-**, **ICD-**. Prefix + absolute number names one object across the whole database.

SR-5 and **SUB-5** are **different objects**. Always cite a cross-module reference as **prefix + absolute number** — never the bare outline number.

PIN THE VERSION · LINK FOR THE RTM

A URL can target a **baseline**, so the reference resolves to what the object said at that milestone — not the moving **Current**.

NOTE A URL is for **human navigation** and external documents. True cross-module traceability still flows through **link modules** — that, not the URL, is what the RTM reads.

08 REQUIREMENT MATRICES

COVERAGE AS A GRID · ROWS × COLUMNS OF LINKS

THE TRACEABILITY MATRIX **ANALYSIS** · **WIZARD**

A matrix crosses two modules — **source objects down the rows, target objects across the columns**. A marked cell means a link of the chosen type joins that pair.

It is a **read-only analysis view**, recomputed on open from the live links — it stores nothing of its own.

READING COVERAGE AT A GLANCE

Empty row **Uncovered** source — nothing downstream satisfies or verifies it.

Empty col **Orphan** target — nothing traces up to it.

Full row Complete coverage for that requirement.

MATRIX VS. RTM COLUMN

The **matrix** is the 2-D module × module picture; the **RTM column** (§05) shows the same links inline, per object.

TIP Neither stores coverage — both read live links. Filter the source view first, then **rerun after any bulk change**.