

Attribute of Requirement

 The ambulance control system shall be able to handle up to 100 simultaneous emergency calls.

· Source: R. Thomas

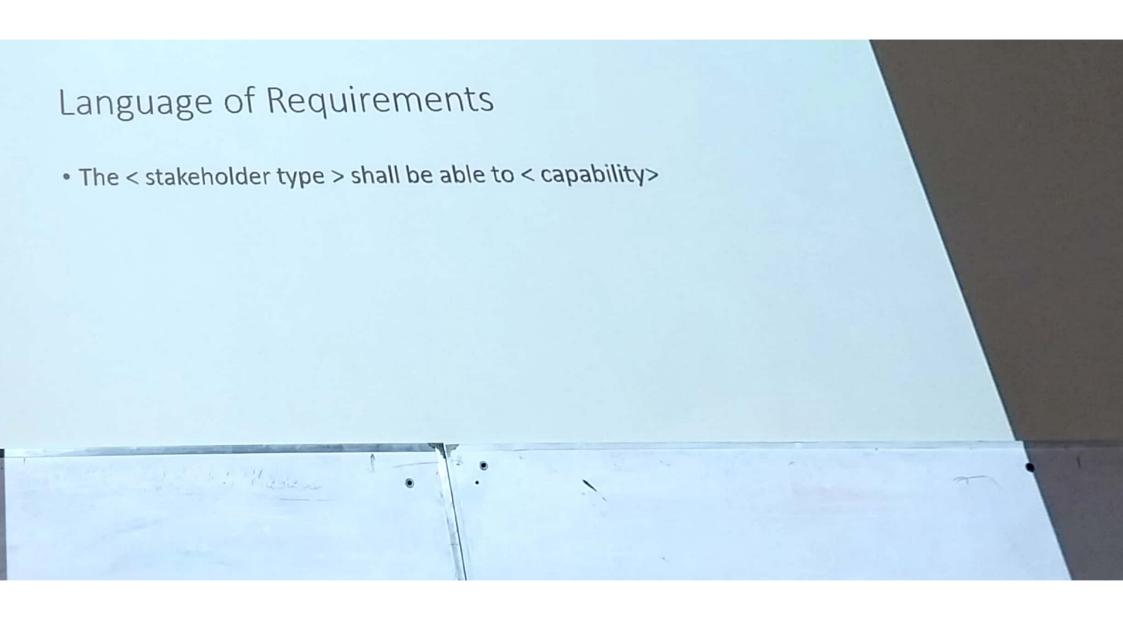
Priority: Mandatory

• Release: 1

Review status: Accepted

· Verifiable: Yes

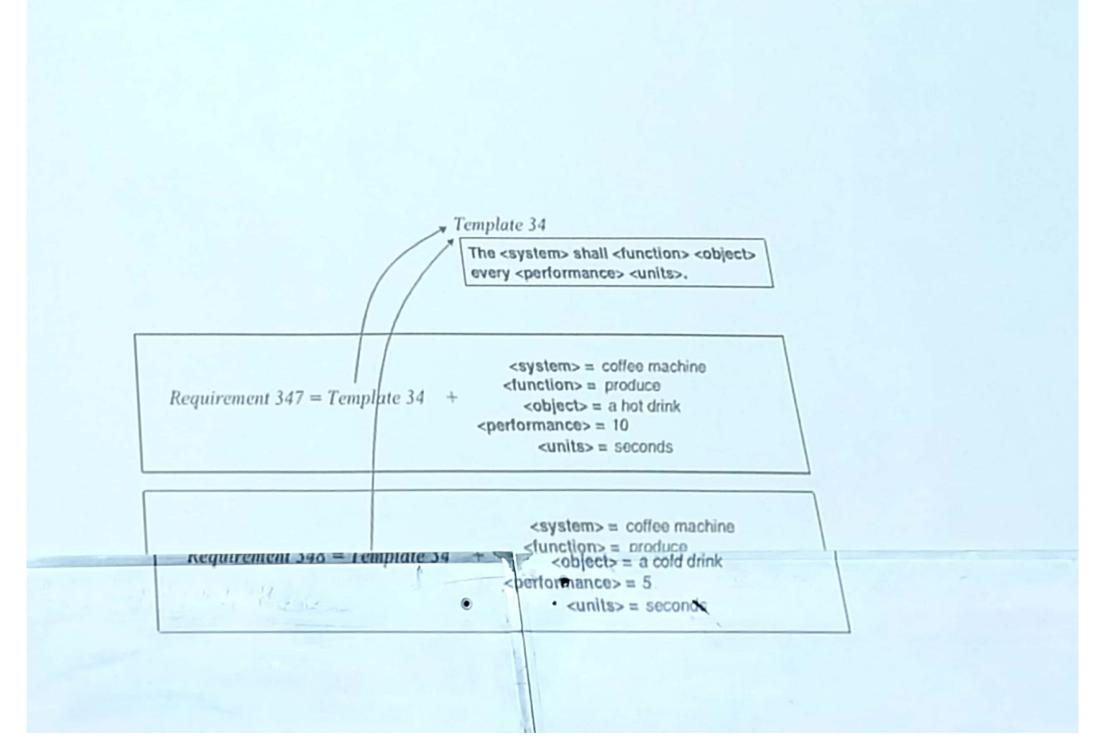
Verification: By simulation, then by system test.



Requirement Boilerplate

A requirement boilerplate is essentially a Natural Language (NL)
pattern that restricts the syntax of requirements sentences to predefined linguistic structures.

Type of Constraint	Boiler-Plate
Performance/capability	The < system > shall be able to < function > < object > not less than < performance > times per < units > .
Performance/capability	The < system > shall be able to < function > < object > of type < qualification > within < performance > < units >.
Performance/capacity	The < system > shall be able to < function > Not less than < quantity > < object>
Performance/timeliness	The < system > shall be able to < function > < object > within < performance > < units > from < event>.
Performance/periodicity	The < system > shall be able to < function > not less than < quantity > < object > within < performance > < units > .
Interoperability/capacity	The < system > shall be able to < function > < object > composed of not less time < performance > < units >
and the same of	with < external entity>
Sustainability/periodicity	
Environmental/operability	The < system > shall be able to < function > < object >
Environmental/operability	The < system > shall be able to < function > < object > while < operational condition >.



Criteria for Writing Requirements

- Atomic: each statement carries a single traceable element.
- Unique: each statement can be uniquely identified.
- · Feasible: technically possible within cost and schedule.
- Legal: legally possible.
- Clear: each statement is clearly understandable.
- Precise: each statement is precise and concise.
- Verifiable: each statement is verifiable, and it is known how.
- below.

Problems in Requirement

• The system shall perform at the maximum rating at all times except that in emergencies it shall be capable of providing up to 125% rating unless the emergency condition continues for more than 15 min in which case the rating shall be reduced to 105% but in the event that only 95% can be achieved then the system shall activate a reduced stated values for a minimum of 30 min

- Avoid rambling: conciseness is a virtue; it doesn't have to read like a novel
- Avoid let-out clauses: such as "if that should be necessary"; they render the requirements useless.
- Avoid putting more than more requirement in a paragraph: often indicated by the presence of the word "and".
- Avoid speculation.
- Avoid vague words: usually, generally, often, normally, typically.
- Avoid vague terms: user friendly, versatile, flexible.
- platforms, never fail, handle all unexpected failures, upgradeable to all future situations.