Modeling Information About an Entity

Scenario Objective  
To model how different types of information (e.g., identifiers, names, descriptions, specifications) are related to a single entity. This pattern clarifies the fundamental concept of "about-ness" by distinguishing between:

* **Unique identification** (e.g., a serial number).
* **General classification** (e.g., a model name or part number).
* **Qualitative description** (e.g., a marketing tagline or functional description).
* **Rules and requirements** (e.g., an engineering specification or regulatory standard).

General Pattern Description  
This pattern establishes the relationship between an iof:InformationContentEntity (a piece of information) and the bfo:Entity it is about. It uses specific sub-properties of iof:isAbout to precisely define the nature of the relationship.

The four primary modes of "about-ness" are:

1. **iof:designates (The Unique Identifier):** A functional relation used when an iof:InformationContentEntity (specifically an iof:Identifier) uniquely identifies a *single, specific instance* of an entity. Example: A unique serial number for one turbine blade.
2. **iof:denotes (The General Name/Type):** Used when information refers to a class or type of entity, potentially applying to many instances. Example: A part number that applies to all blades of a certain model.
3. **iof:describes (The Qualitative Description):** Used to convey attributes, characteristics, or contextual information about an entity without providing a unique identification. Example: "Stage 3 High-Pressure Turbine Blade".
4. **iof:prescribes (The Rule or Specification):** Used when information represents a rule, guideline, or specification that an entity is expected to conform to. This often applies to entities that may not exist yet (e.g., during design). Example: "Material must conform to spec AMS 5662".

# General Pattern for Information "About-ness"

A diagram of a network

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*The core classes and relationships for modeling information. Different sub-properties of "is about" (designates, describes, prescribes) allow for precise modeling.*

Use Case: Information About a Car  
In this use case, various pieces of information about a car are asserted using the different "about-ness" relations to demonstrate their distinct meanings.

**Use-Case Pattern Description**  
The diagram below applies the general pattern to a specific car instance (ns1:car1).

* **The Entity (ns1:car1):** An instance of iof:MaterialArtifact.
* **Designation (ns1:car1-vin-number):** The VIN iof:designates the car. As an iof:Identifier, it uniquely points to this one specific vehicle.
* **Denotation (ns1:car1-model-name):** The model name "Toyota Camry" iof:denotes the car. This name refers to the general model and is not unique to this single car.
* **Description (ns1:car1-tagline):** The marketing tagline iof:describes the car, providing qualitative, non-identifying information.
* **Prescription (ns1:passenger-vehicle-specification):** The GVWR standard iof:prescribes a regulatory requirement that the car must meet to be classified as a passenger vehicle.

# Use Case Application

A diagram of a company

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*An example showing a single car (ns1:car1) connected to different types of information using the appropriate "about-ness" relations.*