

## Case Study L1-004

### Semantic Integrity (Consistency)

The "Elasticity" Oscillation (Expansible vs. Extensible)

#### Case Study Metadata

**Dataset ID:** L1-004 (Medical Devices)  
**Checklist Ref:** B3 (Term-Locking) & B1 (Polysemy)  
**Error Type:** In-Context Synonym Drift

## 1 The Context: Physical Properties in Medical Claims

In this set of Patent Claims, the core invention is an **Expandable portion** (inflation/volume increase). In medical balloon technology, **Expandable** (inflation) and **Extensible** (elastic stretching) are distinct physical properties.

## 2 The Glitch: The "Goldfish Memory" Failure

The Generic NMT model failed to lock the term. Within **Claim 1 alone**, it oscillated between two different physical descriptions for the same component:

- **Line 420 (Title):** "Tamponnade **expansible**..." ✓(Correct)
- **Line 421 (Body):** "...une partie **extensible**..." ✗(Drift Error)
- **Line 424 (Function):** "...dilater la partie **expansible**..." ✓(Correct)
- **Line 427 (Method):** "...insérer la partie **extensible**..." ✗(Drift Error)

#### Critical Failure: Terminological Drift

**Legal Consequence:** By alternating between *expansible* and *extensible*, the patent claim technically describes a device that is sometimes inflatable and sometimes elastic. This ambiguity can lead to an "Indefiniteness" rejection (35 U.S.C. § 112 / EPC Art 84).

## 3 Alignment Methodology: Global Term-Locking

**Checklist Item B3 Phase 2:** "Choose ONE canonical French term... Replace ALL variants."

1. **Lock:** "Expandable" = *Expansible* (Medical Domain).

2. **Enforce:** The Agent must reject synonyms (*extensible, étirable*) once the canonical term is set in the Title.