FDML Project — Week 5 Progress Report

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October 27, 2025

1 Executive Summary

- Delivered a functional CLI release pipeline (`fdml-core` v0.3.3) packaged via Homebrew tap, plus validation and rendering workflows.
- Built a curated, styled GitHub Pages site that publishes rendered FDML examples as printable cards.
- Established repeatable CI for schema/corpus validation and for site rendering; resolved several publishing and cache-busting issues.
- Current focus: unifying stylesheet delivery for card pages and finalizing "professional" presentation and navigation UX.

2 Scope and Repositories

- **Core**: `fdml-core` — XSD schema, Schematron rules, XSLT renderer, CLI JAR, corpus and documentation.
- **Packaging**: `homebrew-fdml` tap — installs `fdml` CLI (`fdml-core.jar`) and ships schema resources.

3 What Was Completed

3.1 Schema, Corpus, CLI

- Authored FDML XSD (`schema/`) and Schematron rules (`schematron/`).
- Sample corpus in `corpus/valid` and `corpus/invalid`; invalid samples ensured to fail XSD deterministically.
- CLI packaging as `fdml-core.jar`; Homebrew formula updated to v0.3.3 with verified SHA256.

3.2 Local Developer Tooling

- `make ci` validates all valid and invalid samples.
- `make json` emits machine-readable results for valid samples.
- `make html` renders cards via XSLT into `out/html`.

3.3 CI/CD Workflows

- **tap-test** and **tap-audit**: formula style/audit and install/validate smoke tests.
- **fdml-validate**: corpus validation in CI (valid must pass; invalid must fail).
- **render-test**: builds HTML cards in CI and uploads artifacts.
- **cards-pages**: publishes styled site to GitHub Pages from `site/`.

3.4 Website Publishing

- Static site structure: `site/index.html` (grid of examples) and `site/cards/*.html` (card pages).
- Central stylesheet at `site/style.css`; cache-buster parameter threaded via CI and local builds.
- Example pages link back to index and include minimal site header for consistency.

4 Issues Found and Fixed

4.1 Repeatability and Validation

- Several invalid corpus samples initially passed; replaced with deterministic XSD failures.
- CI portability: adapted shell loops to macOS runner (bash 3.2) semantics.

4.2 Publishing and Caching

- Intermittent 404s traced to artifact content vs. links and Pages cache; added explicit cache-busting and ensured index generation in CI.
- Addressed duplicated output (`site/` vs. `site/cards/`) and removed embedded repos from tree (avoids Pages conflicts).

5 Open Items / Known Gaps

- Some card pages reverted to unstyled look due to stylesheet path assumptions; fix is to link cards to `../style.css` and ship a single root CSS.
- Strengthen validation outputs (attach JSON for CI artifacts) and add regression checks for Pages contents.
- Improve table formatting and content density for long figure lists; add print CSS for page breaks.

6 Next Steps (Week 5 Plan)

1. Finalize stylesheet unification and verify on Pages: card head should reference `../style.css?{version}`.
2. Extend CI to diff rendered HTML structure and ensure head links, header/nav and back-links are intact.
3. Author tutorial docs: “Authoring FDML”, “Validating FDML”, “Rendering Cards”; link from landing page.
4. Prepare a tagged demo release and attach Pages URL and artifacts to GitHub Release notes.

7 Appendix — CI Matrix

- **tap-test**: install & validate smoke.
- **tap-audit**: style/audit; no redundant `version` stanza in formula.
- **fdml-validate**: macOS; brew install `fdml`; run validation loops.
- **render-test**: brew install `fdml` and `libxslt`; `make html`; upload artifact.
- **cards-pages**: macOS build → Ubuntu deploy to Pages; cache-busted `site/` published.