Translation Sync Action

AI-Powered Translation Automation for Documentation

GitHub Action • Claude Sonnet 4.5 • MyST Markdown

QuantEcon Project

What It Does

Automatically translates documentation when source content changes

Monitor merged PRs → Detect changes → Translate → Create review PR

Key Capabilities

✓ **Smart Diff Translation** – Only translates modified sections

✓ **Section-Based Matching** – Tracks content across languages

✓ **MyST Markdown Aware** – Preserves code, math, directives

✓ **Consistent Terminology** – Built-in glossaries (342+ terms)

✓ **Review Workflow** – All translations go through PR review
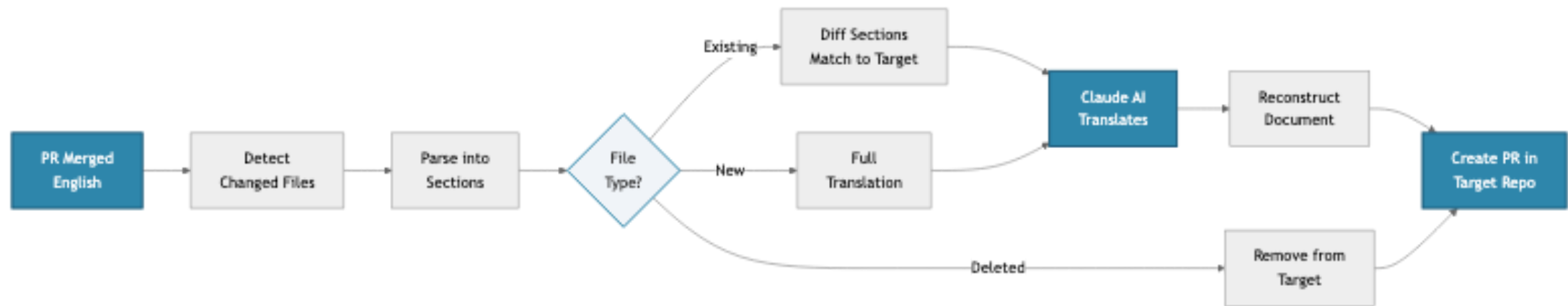
How It Works

Section-Based Translation Approach

❌ Problem: Block-Level

- Can't match across languages
- Loses translation context
- Complex mapping logic

✅ Solution: Section-Based

- Match by position
- Translate full sections
- Simple: Add, Update, Delete

Translation Workflow

LLM-Powered Translation (Claude Sonnet 4.5)

UPDATE Mode

(changed sections)

- Sends: old EN + new EN + current translation
- Claude understands what changed
- Preserves style and terminology
- Uses glossary for consistency

NEW Mode

(new sections)

- Translates with full context
- Uses glossary for consistency
- Maintains document structure

Status & Getting Started

Current Status

📦 **v0.4.6** – Production-Ready
🎯 **v1.0** – API Stabilization
✅ 125 tests passing

Use Cases

- Multi-language docs

- Educational content

- Technical documentation

- OSS localization

Resources

GitHub
quantecon/action-translation-sync

Docs
Comprehensive guides in `docs/`

License
MIT