RCF Publish Bundle: Minimal Experiment / Reproduction Guide

Purpose

This document describes the minimal commands to regenerate theorem-level validation artifacts shipped with the publish bundle under `rcf-publish/results/`.

Environment

- Windows 11 / PowerShell
- Python (tested with Python 3.12; recommended: project venv at repo root, if present)

Dependencies

These harnesses require:

- `numpy`
- `scipy`

Install (inside your venv if you use one):

```
python -m pip install --upgrade pip
python -m pip install numpy scipy
```

If you have a venv at repo root, activate it then return to this folder:

```
cd ..
.\.venv\Scripts\activate
cd .\rcf-publish
python --version
```

Run Validation Harnesses

Run from inside `rcf-publish/`. Each command prints detailed terminal output and writes machine-readable outputs into `results/`.

URSMIF v1.5

```
python python_test/ursmif-theory.py
```

Outputs: `results/ursmif_test.json`

RBUS (Recursive Bayesian Updating System)

`python python_test/rbus-theory.py`

Outputs: `results/rbus_theory_test.json`

Bayesian Volition Theorem (BVT-2)

`python python_test/bayesian-volition-theory.py`

Outputs: `results/bayesian_volition_test.json`

Preference Theory

`python python_test/pref-theory.py`

Outputs:

- `results/preference_theory_test.json` (legacy)
- `results/preference_theory_test_manifest.json`
- `results/preference_theory_test_report.md`

Internal Contradictions Theory

`python python_test/internal-contradictions-theory.py`

Outputs:

- `results/internal_contradictions_theory_test_report.md`
- `results/internal_contradictions_theory_test_manifest.json`

Archived Logs (Optional)

If you want the previously captured logs as-is (without re-running code), see:

- `python_test/URSMIF_Validation.md`
- `python_test/rbus-theory.md`
- `python_test/bayesian-volition-theory.md`
- `python_test/pref_theory_terminal_log.md`
- `python_test/internal-contradiction-validation.md`