UEI	CAGE	SAM.GOV	ENTITY	HEADQUARTERS	OWNERSHIP
J8PVQBNB34A5	25C44	Active	Delaware C-corporation	Paradise Valley, AZ	U.S. majority owned

SolvFilter · engineer eval

Engineer pilot handout · 20 October 2026

Job: Replace only the **EKF predict step** when state dimension or **UKF** compute breaks your cycle budget.

Compare to: scipy/classical **EKF**, **UKF**, **IMM-EKF/UKF** on the **same** track replay.

Pilot KPIs: Predict-step **completion**; **wall time** vs UKF at operational dimension; RMSE vs the filter you would actually ship (often UKF when UKF is the cost bottleneck).

Get the build (v0.1.2): Register at the Resonix account portal, download the Linux wheel or customer bundle, then `pip install solvfilter-*.whl` and activate a trial seat; [install guide](https://docs.resonixusa.com/solvfilter/install) · [release notes](https://docs.resonixusa.com/solvfilter/release-notes/0.1.2).

30-day pilot: Replay **your track tables** with **frozen association**; dim typically ≥ 50 for swarm-class stories.

Pass: 100% completion on manifest; RMSE within your SOW vs named incumbent; documented wall-time win when UKF was the limiter.

Lab evidence (scope): Resonix validates two **separate** stories; do not merge in one sentence. **`solvfilter` (UKF relief):** large wall-time wins vs **UKF** on the radar reference pack; does **not** claim blanket scipy **EKF** RMSE/wall wins. **`hybrid_auto` (EKF parity):** predict-step wall **~1.014×** scipy **EKF** with **0.0673 m** RMSE parity on the reference closed-loop acceptance tape. Radar reference: **~57×** UKF on multi-target medians; **~30×** @ dim **140**. Integration dispatch matches the written routing table (**7/7** regression cases). **Not** an IMM replacement; maneuver crosswalk only. Full methodology: [technical specification](../solvfilter-technical-specification-external-2026-09.md).

Do not compare to: Full fusion stack, vision detection, or IMM swap without maneuver replay.

Integration: Drop-in predict integrator; you keep association and track management.

Opt-in (Nov 2026): After a pilot passes the **hybrid_auto** EKF-parity profile, an optional routing profile may send “hot” innovation buckets to SolvFilter. Default scipy-EKF predict on EKF-default programs is unchanged unless your SOW enables `hybrid_auto`. ## Receipted wins (handout; name the incumbent) | Posture | Claim (vs incumbent) | Context | |:---|:---|:---| | **Better** | **~29.7×** UKF wall @ dim 140; **~57×** UKF @ multi-target medians | Radar reference pack; **UKF relief** profile | | **Better** | Wall **≤1.05×** scipy **EKF** + RMSE parity on acceptance tape | **`hybrid_auto`** closed-loop reference | | **Better** | Export manifest predict step **~3.4×** EKF (opt-in integrator) | Declared export integration path | | **Parity** | Dimension-ladder RMSE within **10%** of scipy **EKF** | Full dimension sweep | | **Parity** | Runtime routing matches integration policy table | **7/7** automated regression cases | | **Parity** | Default manifest integration **~1.01×** vs contract baseline | Customer default manifest profile | ## Product features in the evaluation build Fast-path predict (dim≤200) · integration dispatch (`choose_predict_arm`) · optional **`hybrid_auto`** · optional **`integrator_cvode_reuse`** export tier · `imm_ekf` / `imm_ukf` / optional `imm_solvfilter` · vertical certification packs available as add-on.

NAICS

541715 PRIMARY

513210 · 541511 · 541512

PSC

AJ12

DA01

R425

INQUIRIES

Partnering, teaming and technical questions

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