

# SDNE Platform Issues — Workshop Leave-Behind

2026-05-27

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Each row: headline measurement → root cause → ask → what it unlocks. Full evidence and reproducible commands in the 8-page report at [sdne.neuroplans.app/issues](https://sdne.neuroplans.app/issues).

### Seven Platform Asks (Samsung + Google)

#	Headline (measured on Galaxy XR R32Y8003FKF)	Root cause	The ask	Unlocks
1	147 false saccadic intrusions on a 12-trial healthy run; ~118 ms compositor stall every ~0.5 s	OpenXR runtime / compositor frame-pacing stall in passthrough	Fix the stall, or expose gaze-sample timestamp + validity flag	Valid saccade, pursuit, convergence stimuli
2	FINE-mode eye-tracking sample rate, latency, accuracy undocumented	Platform documentation gap	Publish FINE-mode specs; consider a clinical-rate mode	Defensible nystagmus + saccade-velocity metrics
3	Inward camera held exclusively by <code>com.google.xr.perception.inputserver</code>	Consumer policy ("No" — Samsung Korea R&D 2026-04-30)	Research-NDA pathway (Cheri Ask #1)	Clinician video review + full quantitative oculomotor analysis
4	<code>camera_id=0</code> documented "preview"; downward FOV unknown	Documentation + sensor-geometry gap	Confirm live world-camera access; publish downward FOV	Lower-extremity battery + reflex observation via camera + on-device ML
5	OpenXR "full-body" legs are <i>inferred</i> from head + hands, not measured	No leg-mounted sensor on Galaxy XR	Real lower-body sensing roadmap (or partial via Ask 4)	Heel-to-shin, foot tap, patellar reflex observation
6	0.18 m walked → 3.01 m reported (~17× SLAM drift); ~2 m safety boundary halts	Consumer safety policy + SLAM uncorrected in passthrough	Knox boundary exception (Cheri Ask #3) + <5 cm drift over 3 m	Real Timed Up-and-Go + 10-m walk gait speed + symmetry
7	Blendshapes all 0.0; <code>XR_ERROR_SERVICE_NOT_READY_ANDROID</code> reproduces in Google's own first-party <code>facetracking.calibration</code> app	Galaxy XR runtime / face-tracking service-level bug	Service ready-state fix	T07 Facial Activation (CN VII / Bell's palsy / FAST stroke screen)

### Three Research-Partner Pathway Proposals (Cheri Malo thread, 2026-05-04)

- **Cheri Ask #1** — Raw inward-camera frames under research NDA. Framework: IRB + BAA + patient consent + Sevoro HIPAA pipeline. Resolves Issues 1 / 2 / 3 / 5.
- **Cheri Ask #2** — Documented post-hoc Galaxy Watch ↔ Galaxy XR NTP synchronization. Documentation only, no new APIs. Unlocks Watch-based limb capture (arm swing, tremor cross-check, ankle-IMU as partial mitigation for Issue 5).
- **Cheri Ask #3** — Pass-through boundary exception under Samsung Knox. Knox-managed clinical device profile + MA supervision. Resolves Issue 6 (consumer safety boundary).

**Status legend.** "Acknowledged" = Samsung Korea R&D confirmed 2026-04-30. All other items Open. Issues 3 and 6 acknowledged as consumer "No" — research-pathway exceptions are the proposed mitigation.

Full 8-page report with appendices + reproducible ADB commands: [sdne.neuroplans.app/issues](https://sdne.neuroplans.app/issues) · Repo: `outputs/SDNE_Platform_Issues_Report_v1.0.md` · Branch: `docs/platform-issues-report-v1.0`