Coordinated Privacy Disclosure, Final Report

Meowdoku Android (com.oakever.meowdoku)

Oakever / Oakever Games, Chinese developer, no EU establishment

SILENT · CASE CLOSED AND PUBLISHED 25 SEPTEMBER 2026, TWO DAYS AFTER THE EMBARGO, FOUR MESSAGES ACROSS TWO ADDRESSES, ZERO REPLY OF ANY KIND

Target	Meowdoku, a cat-themed sudoku puzzle game for Android
Package	com.oakever.meowdoku
Operator	Oakever / Oakever Games, a Chinese developer with no EU establishment
Initial Disclosure	2026-06-25
Original Embargo	2026-09-23 (90 days from disclosure, as stated in the original notice)
Report Published	2026-09-25, two days after the embargo, an internal publishing gap, not a change in terms
Regulators	Austrian DSB (lead SA under Art. 3(2), no EU establishment), CERT.at
Total Outbound Messages	4, across 92 days. The original 25 June send to feedback@oakever.com bounced repeatedly through 30 June before a working address, privacy@oakevergames.com, was found and used for three further sends (5 August, 15 August, 6 September).
Inbound Replies	0. No reply, automated or human, was ever received on any address.

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Executive Summary

On 25 June 2026, RFI-IRFOS disclosed to Oakever Games that its Meowdoku Android puzzle game ships a ContentProvider, com.learnings.usertag.provider.UserTagInnerProvider, declared at android:initOrder=20000, a value no standard SDK integration uses and higher than every other component in the binary. Android's ContentProvider initOrder is a value the developer sets explicitly; at 20000 the user-tagging system initializes before the Application class runs its lifecycle methods, before any UI thread exists, and before any consent management platform can render a dialog. By the time a consent mechanism could theoretically appear, the tagging has already run.

A second finding names a third-country transfer gap: EU users' advertising identifiers, device fingerprints, and in-game behavioral data flow to MyTarget, operated by Russia's VK Group, and to Yandex Mobile Ads, operated by Yandex LLC, both confirmed active in the binary via AppLovin mediation adapters. Neither Russia nor China, where the Meevii ad SDK is based, has an EU adequacy decision, and no Art. 46 transfer safeguard was located for either.

Four messages were sent across 92 days. The original 25 June disclosure to feedback@oakever.com bounced repeatedly through 30 June before a working address, privacy@oakevergames.com, was located; three further messages followed on 5 August, 15 August, and 6 September 2026. Not one reply, automated or human, was ever received on any address at any point. The 90-day embargo, set at first contact, elapsed on 23 September 2026. This report and the accompanying closure notice publish two days later, an internal gap on RFI-IRFOS's side, not a change to the terms already disclosed.

Scope: Root-level static analysis of the production Meowdoku Android application (com.oakever.meowdoku, version 1.6.0, 106 MB), as pulled via ADB from a physical device and reviewed on 25 June 2026. No dynamic instrumentation, live traffic capture, or interaction with Oakever's, VK Group's, Yandex's, or Meevii's backend infrastructure was performed.

Disposition

Six findings were disclosed on 25 June 2026, re-scored under CVSS v4.0. All six correct to MEDIUM on their computed bands, including a ContentProvider deliberately set to initOrder=20000, the highest priority value found anywhere in the binary, guaranteeing a user-tagging system initializes before the Application class, any UI thread, or any consent dialog can render. Two Russian ad networks (MyTarget/VK Group, Yandex Mobile Ads) and a Chinese ad SDK (Meevii) route EU user data to jurisdictions with no EU adequacy decision. Four messages were sent across 92 days, the first bouncing repeatedly before a working address was found. Not one reply of any kind was ever received.

ID	Severity	Title
C1	MEDIUM	A ContentProvider Set to initOrder=20000 Guarantees User Tagging Before Any Consent Dialog Can Render
C2	MEDIUM	MyTarget and Yandex Mobile Ads Route EU User Data to Russia Without an Adequacy Decision

ID	Severity	Title
H1	MEDIUM	Meevii, a Chinese Ad SDK, Active at Process Creation
H2	MEDIUM	Facebook Codeless Event Logging Captures Gameplay and Purchase Events
H3	MEDIUM	Firebase API Key Hardcoded and Extractable
M1	MEDIUM	Nine-Network Ad Mediation Stack in a Puzzle Game

Subject & Operator Analysis

Meowdoku is a cat-themed sudoku puzzle game published by Oakever Games, a Chinese developer with no EU establishment, placing the Austrian DSB as lead supervisory authority under Art. 3(2) for Austrian users.

Several genuine positives are worth naming. allowBackup is correctly set to false. A network security configuration is present. No microphone, camera, or location permissions are declared, a notably focused permission set for an ad-monetized mobile game. The game premise itself carries genuine user value.

Four Messages, Two Addresses, Zero Reply

This case's correspondence record involved an address failure before a working channel was found. The original 25 June 2026 disclosure to feedback@oakever.com bounced repeatedly through 30 June 2026. A corrected address, privacy@oakevergames.com, was located and used for three further sends on 5 August, 15 August, and 6 September 2026, each restating the three original open questions. Not one reply, automated or human, was ever received on either address at any point.

Findings

C1: A ContentProvider Set to initOrder=20000 Guarantees User Tagging Before Any Consent Dialog Can Render

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:L/VI:N/VA:N/SC:N/SI:N/SA:N, 6.9.

com.learnings.usertag.provider.UserTagInnerProvider is declared at android:initOrder =20000 (0x4e20), the highest initOrder value found anywhere in the binary, well above the com.learnings analytics provider at 10000, Meevii's ad SDK also at 10000, AppLovin at 101, and AdMob/Firebase at 100. This value is developer-set, not an SDK default; no standard integration guide ships this value. At initOrder=20000, the user-tagging system initializes before the Application class runs its lifecycle methods, before any UI thread exists, and before any consent management platform can render a dialog, making it structurally impossible to gate this component behind consent. The com.learnings SDK suite is confirmed to integrate Facebook Analytics and Firebase Analytics internally.

```
com.learnings.usertag.provider.UserTagInnerProvider   initOrder=20000 (0x4e20)
com.learnings.analyze.inner.provider.InnerAnalyzeProvider   initOrder=10000
com.meevii.adsdk.provider.InnerProvider   initOrder=10000
com.oakever.meowdoku.applovininitprovider   initOrder=101
com.oakever.meowdoku.mobileadsinitprovider   initOrder=100, directBootAware=true
com.google.firebase.provider.FirebaseInitProvider   initOrder=100, directBootAware=
    true
```

Impact: A user-tagging system begins collecting before any point in the app's lifecycle at which a consent dialog could technically appear, meaning no consent mechanism, however implemented, could ever precede this component's activation.

Fix: Reduce UserTagInnerProvider's initOrder below any consent-gating component's, or move initialization out of the ContentProvider lifecycle entirely into a post-consent code path. No confirmation that this has occurred was ever received.

C2: MyTarget and Yandex Mobile Ads Route EU User Data to Russia Without an Adequacy Decision

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:L/VI:N/VA:N/SC:N/SI:N/SA:N, 6.9.

MyTarget (operated by VK Group, Russia) and Yandex Mobile Ads (operated by Yandex LLC, Russia) are both confirmed active via AppLovin mediation adapters, with Yandex's SendBeaconWorkerImpl confirming live analytics beacons. Both receive Android Advertising ID, device fingerprint, and in-game behavioral data. Russia has no EU adequacy decision, and EDPB guidance since February 2022 states transfers to Russia require Art. 46 safeguards; no such safeguard documentation was located.

```
com.oakever.meowdoku.mytargetcontentprovider
META-INF/com/applovin/mediation/mytarget-adapter/verification.properties
com.yandex.mobile.ads.*
com.yandex.android.beacon.SendBeaconWorkerImpl
META-INF/com/applovin/mediation/yandex-adapter/verification.properties
```

Impact: Advertising identifiers, device fingerprints, and behavioral data from EU users flow to two Russia-based processors with no documented Art. 46 transfer safeguard.

Fix: Document Art. 46 standard contractual clauses and a transfer impact assessment for both processors, or remove them from the mediation waterfall. No confirmation that this has occurred was ever received.

H1: Meevii, a Chinese Ad SDK, Active at Process Creation

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:L/VI:N/VA:N/SC:N/SI:N/SA:N, 6.9.

Meevii's ad SDK ContentProvider initializes at initOrder=10000, active at process creation. Meevii is a Chinese mobile advertising company subject to PRC National Security Law Art. 7, an obligation to cooperate with Chinese intelligence agencies on demand. China has no EU adequacy decision.

```
com.meevii.adsdk.provider.InnerProvider    initOrder=10000
com.meevii.push.provider.HmsContentProvider
```

Impact: EU users' advertising identifiers and behavioral data collected by Meevii may be subject to Chinese intelligence access without EU legal process.

Fix: Document an Art. 44-49 transfer mechanism for the Meevii integration or remove it, and name Meevii as a third-country processor under Art. 13(1)(e). No confirmation that this has occurred was ever received.

H2: Facebook Codeless Event Logging Captures Gameplay and Purchase Events

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:L/VI:N/VA:N/SC:N/SI:N/SA:N, 6.9.

Meta's codeless event logging (CodelessLoggingEventListener, AutoLoggingOnClick Listener, InAppPurchaseBillingClientWrapper) captures gameplay interactions, puzzle moves, level completions, and in-app purchase events, forwarding them to Meta's advertising infrastructure without explicit code-level event definitions. The com.learnings SDK also integrates Facebook Analytics internally.

```
com.facebook.appevents.codeless.CodelessLoggingEventListener
com.facebook.appevents.iap.InAppPurchaseBillingClientWrapper
com.learnings.analyze.platform.FacebookAnalyze
```

Impact: Purchase behavior and gameplay interactions are captured automatically and forwarded to Meta with no code-level event definition to review or limit what is sent.

Fix: Disable codeless event logging or document the specific event set forwarded to Meta under Art. 13(1)(e). No confirmation that this has occurred was ever received.

H3: Firebase API Key Hardcoded and Extractable

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:N/VI:L/VA:L/SC:N/SI:N/SA:N, 6.9.

A Firebase API key is hardcoded in the binary and extractable in seconds with strings. Depending on the Firebase project's security-rule configuration, this enables unauthorized database access or quota-exhaustion denial of service.

```
AIzaSyARol6ad-GmjfF5tJi6TMtDhYj1HdMIrLc
```

Impact: The key is trivially extractable, and depending on the security-rule configuration behind it, could enable unauthorized access or denial of service against legitimate users.

Fix: Restrict the Firebase API key by package name and SHA-1 certificate fingerprint, and audit the associated project's security rules. No confirmation that this has occurred was ever received.

M1: Nine-Network Ad Mediation Stack in a Puzzle Game

MEDIUM, CVSS v4.0 AV:N/AC:L/AT:N/PR:N/UI:N/VC:L/VI:N/VA:N/SC:N/SI:N/SA:N, 6.9.

AdMob, AppLovin MAX, MyTarget, Yandex Mobile Ads, Smaato, Unity Ads, Vungle/Liftoff, Facebook Audience Network, and Amazon Publisher Services are all confirmed active in a single mediation waterfall, alongside all three Privacy Sandbox permissions (AD_ID, ADSERVICES_ATTRIBUTION, ADSERVICES_TOPICS) and AppsFlyer attribution tracking.

```
AdMob, AppLovin MAX, MyTarget, Yandex Mobile Ads, Smaato, Unity Ads, Vungle/Liftoff,
    Facebook AN, Amazon APS
ACCESS_ADSERVICES_AD_ID + ACCESS_ADSERVICES_ATTRIBUTION + ACCESS_ADSERVICES_TOPICS
appsflyer_backup_rules.xml
```

Impact: In-game behavior is distributed across nine separate advertising processors, with ADSERVICES_TOPICS inferring behavioral interest categories directly from gameplay.

Fix: Consolidate the mediation stack and document each processor individually under Art. 28 and Art. 13(1)(e). No confirmation that this has occurred was ever received.

Data Protection, Article by Article

The findings map onto a small, specific set of GDPR provisions, set out below in one place instead of scattered across the findings themselves.

Article	Finding	Basis
Art. 25, Art. 7, Art. 5(1)(a)	C1	ContentProvider architected to initialize before any consent mechanism can render.
Art. 44, Art. 13(1)(f)	C2	Undisclosed transfer of advertising and behavioral data to two Russia-based processors.
Art. 44, Art. 5(1)(a)	H1	Undisclosed transfer to a Chinese, PRC-NSL-obligated ad processor.
Art. 5(1)(b), Art. 13(1)(e)	H2	Undisclosed automatic capture of gameplay and purchase events.
Art. 32	H3	Hardcoded, trivially extractable Firebase API key.

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ZVR 1015608684 • GISA 39261441 • UID ATU83405245 • Steuernummer 68 696/8736 • Elisabethinergasse 25/10, 8020 Graz, Austria CVSS v4.0 is RFI-IRFOS's scoring guideline, not a ceiling or a floor. It gives a reproducible, third-party-legible starting point for severity, and it does not capture real-world blast radius on its own, factors such as user population size, a vulnerable or protected class of users, or a standing corporate governance exposure the technical vector alone cannot express. RFI-IRFOS reserves the right to weigh that blast radius above the bare CVSS score, and, more rarely, to hold a score below what CVSS alone would suggest when the underlying claim is unconfirmed or disputed with evidence. In this report, all six findings correct to MEDIUM to match their own computed bands; C1's deliberate initOrder architecture is a documented aggravating pattern worth naming in its own right, independent of the CVSS score it carries. Disclosure conducted under ISO/IEC 29147 and the Austrian Forschungsfreiheitsgesetz, Art. 17 StGG. REF REF: MEOWDOKU-2026-R1.