# Time‑Aware & Quiet‑Hours Messaging — Feature Brief

Date: 2025-08-22 | Author: Naveen G. | Status: Brief v2 (Privacy‑first)

## Problem

People message across time zones and during sleep/focus periods, which leads to accidental late‑night pings and frustration. Senders don’t see a contact’s local time and can’t easily schedule respectful delivery.

## Proposal (lightweight, user‑friendly)

• Optional local‑time chip below contact name (recipient‑shared IANA timezone).

• Recipient‑owned Quiet Hours; if inside that window, default to “Deliver at 7:00 am their time” with a one‑tap override.

• Optional “Urgent” toggle that only requests higher notification priority and still respects OS Focus/DND and recipient controls.

## Why it helps

• Fewer off‑hours messages → higher trust and satisfaction.

• Clear sender intent (normal vs urgent) → fewer complaints and less “message regret.”

• Lightweight and E2EE‑preserving; negligible latency or CPU impact.

## Privacy by Design (concise)

Privacy by design: the feature is strictly opt‑in and shares only a coarse timezone (IANA ID, e.g., “America/Chicago”) and an on/off indicator for Quiet Hours. No precise location, travel history, device DND/Focus state, or exact sleep schedule is ever exposed. The local‑time chip is computed on‑device from a cached timezone string, avoiding extra network calls. Messages remain end‑to‑end encrypted; scheduling adds only a minimal not\_before timestamp as metadata. Data collection is minimized to timezone, a boolean “has quiet hours,” and the scheduled UTC send time.

Residual‑risk mitigations: to avoid pattern‑of‑life leakage, scheduled sends can include a small random jitter (±5–10 minutes), and the exact Quiet Hours window is never revealed to senders—only the computed delivery time. Timezone changes default to user‑confirmed updates and are not broadcast. While the server must see the intended send time via not\_before, this is less sensitive than content and comparable to existing delivery timestamps; we recommend documenting this in the privacy notice and including clear delete/export controls.

## Implementation (lightweight)

• On‑device time chip from cached timezone; no extra round‑trip on chat open.

• Client attaches not\_before (UTC epoch) for scheduled messages; servers queue ciphertext within existing store‑and‑forward.

• No polling; negligible storage/CPU; clear user controls for export/delete.

## Rollout & success

• Phase rollout: 1) time chip 2) Quiet Hours 3) scheduled send + Urgent.

• Measure: ↓ off‑hours deliveries, ↑ post‑send satisfaction (micro‑NPS).