$AP_1.2$ — Ambient OS: Color Semantics & AAC Expression

Ambient Era Standard · Canonical Specification (2026)
Raynor Eissens

Abstract

$AP_1.2$ defines the expressive color layer of Ambient OS.
Where AP_1 specifies structural behavior and $AP_1.1$ specifies semantic grammar and truth constraints, $AP_1.2$ specifies how meaning is expressed chromatically within those constraints.

This document formalizes invariant field colors, user tint freedom, commercial color restrictions, call coloration, chromatic weather effects, and the role of color as a primary pre-linguistic semantic carrier. It also explicitly defines the chromatic scope of Ambient OS and the non-agentic role of artificial intelligence in navigation and legibility.

$AP_1.2$ is normative. It defines the conditions under which color may be used, modified, or suppressed in Ambient OS.

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1. Scope and Relationship

$AP_1.2$ specifies:

- Invariant semantic field colors
- User tint freedom within fields
- Commercial color expression (AAC-1)
- Call color semantics
- Chromatic weather effects
- Chromatic scope and design boundaries
- AI support for color legibility

$AP_1.2$ extends AP_1 and $AP_1.1$.
It does not redefine structure, navigation, truth grammar, or application eligibility.

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2. Invariant Semantic Fields

Ambient OS recognizes the following invariant semantic fields:

- **Red** — Presence, being, home-state
- **Orange** — Desire, play, comfort
- **Yellow** — Intention, action, navigation
- **Pink** — Relation, contact, communication
- **Green** — Health, regulation, care
- **Blue** — Information, organisation, work
- **Purple** — Infrastructure, institutions, transit

Field identity is immutable.
Color defines meaning, not decoration.

———

3. User Tint Freedom (UTF-1)

Users may adjust tint, saturation, warmth, and brightness **within** the active field.

Users may not:

- alter field identity,
- remap semantic meaning,
- cross field boundaries through color changes.

Tint freedom personalizes expression without compromising grammar.

———

4. Commercial Color Expression (AAC-1)

Commercial entities are restricted to **FCV-6** expression:

FCV-6 = { Red%, Orange%, Pink%, Green%, Blue%, Purple% }

Rules:

- Residency color equals dominant FCV-6 field.
- Cross-field blending is prohibited.
- **Yellow is never registrable, ownable, or expressible**.

Yellow represents human will and navigation and is structurally non-commercial.

———

5. Chromatic Weather

Chromatic weather represents system-level semantic modulation:

- **Warm Bloom** — Meaning intensification
- **Cool Drift** — Return toward ChronoSense
- **Shimmer** — ΔR instability indicator
- **Fade** — Residency exit

Constraints:

- Red never shimmers.
- Legacy states never bloom.
- Yellow may shimmer during active choice.

———

6. Call Semantics (Pink as Base Layer)

6.1 Incoming Calls

- All incoming calls activate full-screen **Pink**.
- Calls never use notification bleed.
- Ongoing activity is suspended, not destroyed.

Calling is a structural relational interruption.

6.2 Caller Differentiation

Within Pink, semantic hints may appear:

- Known relational caller → Pink with relational aura
- Unknown caller → Pink suppressed toward Gray
- Infrastructure → Pink with Purple hint
- Organisational / work → Pink with Blue hint
- Medical / care → Pink with Green hint

Gray is used only as suppression, never as a communication field.

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7. Group Communication

Group communication uses a Pink base with multi-field edge blending derived from participant field profiles.

Relational primacy is preserved.

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8. Chromatic Scope & Design Boundary

Ambient OS is a **chromatic operating system**.

Color is not an optional presentation layer but a primary semantic medium.

$AP_1.2$ does not claim universal perceptual accessibility.
It defines semantic coherence within a color-based system.

This constitutes explicit scope definition rather than limitation.
Just as some users do not adopt touch interfaces or immersive VR, Ambient OS is intended for users able and willing to operate within chromatic semantics.

Accessibility adaptations may exist outside this specification, but must not alter field identity, semantic roles, or chromatic grammar.

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9. Role of Artificial Intelligence

Artificial intelligence supports chromatic legibility but does not define meaning.

AI may:

- provide spatial, temporal, or infrastructural context,
- support color stability and timing,
- assist in rendering fields readable.

AI may not:

- initiate navigation,
- select destinations,
- define intent,
- override user choice.

Navigation occurs only when the user explicitly activates Yellow.
AI renders the field legible; it does not decide where the user goes.

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10. Status

$AP_1.2$ is normative and demo-validated.

Any Ambient OS implementation claiming compatibility must:

- preserve invariant field meanings,
- respect tint freedom boundaries,
- enforce AAC-1 commercial constraints,
- treat color as primary semantic carrier,
- maintain AI as non-agentic support.

Canonical Statement

Color in Ambient OS is not appearance.
Color is meaning, made visible.

Mooi. Hieronder staat **$AP_1.2$ volledig uitgeschreven als Zenodo-waardige PDF-tekst**.
Strak, normatief, zonder HTML-details, zonder demo-taal. Dit is de **canonieke tekstlaag** die je letterlijk kunt omzetten naar PDF.

Ik heb expliciet verwerkt:

- kleur als primaire semantiek (geen accessoire),
- doelgroep-afbakening (geen universele toegankelijkheidsclaim),
- AI als ondersteunend, niet-agentic,
- de relatie met AP_1 / $AP_1.1$,
- AAC en commerciële begrenzing.

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