NetMission (APAC Youth) ICANN Public Comment: Draft Guidelines for Advancing UA Adoption

Comment Summary

NetMission.Asia (APAC Youth) welcomes the opportunity to provide input on the February 2026 Draft Guidelines for Advancing Universal Acceptance (UA) Adoption. This report provides the shared view of young Internet users and professionals across the Asia-Pacific region, where the goal of a multilingual Internet has not yet been reached.

Our primary concern is that the Draft Guidelines, while comprehensive in intent, do not yet show the urgent structural changes needed to close the Universal Acceptance (UA) gap for Asia-Pacific communities. UA must move from being a voluntary best practice to becoming a required, measurable and accountable standard across the institutions and systems that ICANN can influence.

Our comments are organised into four themes:

- **Training and Education (Guidelines 8–12, 17–18, 37):** UA must be embedded in developer CI/CD workflows, university curricula and open-source educational platforms such as Moodle and Open EdX, with youth positioned as active co-creators rather than awareness recipients.
- **Policy, Governance, and Metrics (Guidelines 31–32, 43):** ICANN should use its convening authority to catalyse UA compliance in public procurement and Digital Public Infrastructure, cross-border public sector platforms and should advocate for script- and language-based metrics, including real-world IDN/EAI transaction success rates, published via independent UA scorecards.
- **Technical Infrastructure and Security (Guidelines 4, 8–9, 21):** ICANN must integrate UA compliance benchmarks into registrar accreditation and facilitate coordination with IETF on EAI cross-script delivery challenges, while encouraging UA-compliant standards for AI-integrated multilingual systems.
- **Inclusion and Validation (Guidelines 1, 10, 27–30, 42–45):** Measurement frameworks must reach marginalised users through offline UA validation libraries for rural 2G/3G deployments, end-to-end commerce flow validation for women-led digital platforms, acknowledgement of hardware input constraints, and youth-led validation networks that surface ground-truth usability data missed by institutional self-reporting.

Across all themes, we urge the Expert Working Group to sharpen the distinction between what ICANN can enforce within its remit and what it must catalyse through partnership with IETF, W3C, Unicode Consortium and governments. ICANN's greatest contribution to UA adoption is not technical standard-setting but the exercise of its convening authority, contractual leverage over the DNS ecosystem and leadership by internal example.

NetMission.Asia (APAC Youth) Comments

NetMission.Asia and the APAC youth community appreciate the opportunity to provide input on the Draft Guidelines for Advancing UA Adoption. We welcome this draft and support its overall direction. Universal Acceptance is not only a technical issue for our communities, it is a matter of usability, fairness, trust and digital inclusion. Across South and Southeast Asia, the next generation of Internet users will engage online in Devanagari, Urdu, Thai, Burmese, Javanes, and dozens of other scripts. The failure of UA to reach these users is a failure of the Internet's foundational promise.

We have the following comments, which are suggestions meant to enhance the Draft Guidelines.

A. Training and Education (Guidelines 8–12, 17–18, 37)

Building long-term UA adoption requires embedding internationalization into both developer workflows and academic systems. The current gap is not a shortage of talent or events, it is a lack of UA-specific framing within existing education and training ecosystems.

1. Development Workflows and CI/CD Integration (Guideline 17):

Gap: UA failures are frequently detected too late in the software development lifecycle because automated quality checks do not currently test for internationalization compliance.

Recommendation:

- Integrate UA and EAI validation checks into CI/CD pipelines so that script handling failures are caught before code reaches live production environments.
- Provide open-source UA testing modules that development teams can plug directly into existing workflows without building from scratch.

2. Academic Curricula and University Integration (Guideline 37):

Gap: Internationalization is currently treated as an elective or advanced topic in most computer science programmes across APAC, rather than a foundational skill.

Recommendation:

- Advocate for Unicode processing and multilingual infrastructure design to be embedded in core CS and software engineering syllabuses, not offered as optional specializations.
- Prioritize academic partnerships in regions with complex or revival scripts such as Meitei in Northeast India where empirical research on real-world UA gaps is most needed.

3. Open-Source Educational Platforms (Guidelines 8–12):

Gap: Platforms like Moodle and Open EdX are the primary digital education infrastructure across APAC. When they are not UA-ready, the learners most dependent on local-language access are quietly filtered out. In Pakistan specifically, widely used university LMS platforms such as those at NUST (lms.nust.edu.pk) serve tens of thousands of students who encounter barriers when attempting to use Urdu or Sindhi script in registration and authentication flows.

Recommendation:

- Prioritize engagement with maintainers of educational open-source platforms based on regional linguistic impact rather than global usage metrics alone.
- Mandate UA-readiness as a named, non-negotiable goal in the development roadmaps of platforms with deep South and Southeast Asian deployment.

4. Youth as Co-Creators (Guideline 18):

Current: The guidelines correctly identify the need to grow the pipeline of UA-capable developers, but existing outreach approaches treat youth primarily as an audience.

Gap: The barrier in APAC is not a shortage of hackathons or coding competitions, it is that none of them include UA as a problem category.

Recommendation:

- Rather than building parallel awareness infrastructure, work with organizers of existing national and university-level coding competitions to embed UA-specific problem statements directly into their events.
- Train youth as UA ambassadors who carry this knowledge into classrooms, communities, and national IGF processes by creating a multiplier effect that formal awareness sessions cannot replicate.

B. Policy, Governance & Metrics

The adoption of UA must transition from a voluntary best practice to a **compliance-driven requirement embedded in public policy, procurement systems, and measurable accountability frameworks**.

1. Public Procurement and DPI Enforcement (Guidelines 31, 43)

Current: UA is positioned within the DPI and e-governance frameworks.

Gap: No mandatory enforcement; UA adoption remains optional despite public sector influence.

Recommendation:

- After "Digital Public Infrastructure (DPI)" (Guideline 31), insert:

  "Mandate UA compliance (including IDN and EAI readiness) as a **required condition in public procurement, national broadband plans, and e-governance systems**, validated through standardised benchmarks."

Embedding UA into procurement frameworks (e.g., national financial rules) establishes market incentives and ensures that vendors implement UA to access public contracts.

2. Cross-Border Public Sector Interoperability (Guidelines 31, 32)

Current: Focus is primarily on domestic UA adoption.

Gap: Limited emphasis on cross-border usability of public digital services.

Recommendation:

- Insert:

  "Encourage UA adoption in **cross-border public sector platforms** (e.g., tourism, e-visa, cultural services), ensuring systems accept and process diverse native scripts."

UA is a **global interoperability requirement**, rather than solely a domestic inclusion tool.

3. WSIS+20 Alignment and Policy Reframing

Current: UA framed as a technical enabler.

Gap: Does not leverage binding international commitments on multilingualism.

Recommendation:

- Insert:

  "Position UA as the **implementation mechanism for linguistic accessibility commitments** under global frameworks such as WSIS+20 (Para 28)."

Rationale: Reframes UA from optional adoption to **execution of existing policy obligations**, strengthening government accountability.

> *Note on scope: While governments and international bodies such as ITU and UNESCO are responsible for multilingualism policy obligations, ICANN must catalyse engagement with those bodies to establish UA as the operational mechanism for fulfilling those commitments.*

4. Standards Ecosystem and ICANN's Role (Guidelines 3, 21)

Current: General collaboration mentioned without scope clarity.

Gap: Lack of clarity on ICANN's role within broader internationalisation processes.

Recommendation:

- Insert:

  "Collaborate with the Internet Engineering Task Force (IETF) on Email Address Internationalisation (EAI) and the Unicode Consortium on script encoding, while focusing on DNS-level UA enablement."

- Add:

  "Acknowledge the pipeline from Unicode standardisation to Label Generation Rules (LGR), positioning UA as the **operational layer enabling real-world deployment**."

Rationale: Clarifies scope and aligns UA within the **global standards ecosystem**.

> *Note on scope: While the IETF is responsible for EAI (RFC 6530–6533) and IDNA (RFC 5891) standards, and the Unicode Consortium for script encoding, is responsible for this area, ICANN must catalyse coordination of DNS-level UA enablement and adoption across its contracted registry and registrar ecosystem.*

5. Metrics and Corporate Accountability (Guideline 43c)

Current: Metrics rely on country-level aggregation.

Gap: Masks disparities in multilingual regions and limits accountability.

Recommendation:

Refine Guideline 43c:

- "Adopt **script- and language-based metrics**, including:
  - Percentage of applications supporting IDNs and EAI
  - UA compliance across public digital services
  - Real-world success rates of IDN/EAI transactions

Publish via **public UA scorecards and dashboards with independent validation**, complementing institutional reporting."

Rationale: Enables **accurate measurement of inclusion gaps** and drives corporate accountability.

6. Compliance-Oriented UA Ecosystem (Cross-cutting)

Current: UA efforts are largely awareness-driven.

Gap: Lack of enforceable mechanisms limits adoption.

Recommendation:

- Insert:

  "Transition UA to a **compliance-oriented ecosystem standard**, supported by procurement enforcement, benchmarking, and public accountability mechanisms."

Rationale: Structural barriers require **policy enforcement, not awareness alone**.

C. Technical Infrastructure & Security

Universal Acceptance (UA) requires end-to-end readiness across the technology stack. While progress has been made at the registry level, significant gaps persist across registrars, applications, and infrastructure layers.

1. AI and Multilingual Systems (Guideline 4)

Gap: While AI is not directly within the current UA charter scope, its interaction with UA is increasingly relevant. AI systems and voice technologies often fail to accurately process non-ASCII scripts, leading to degraded outputs and loss of linguistic nuance.

Recommendation (add under Guideline 4):

- Promote UA-compliant input, rendering, and validation standards for AI-integrated systems
- Encourage collaboration with relevant bodies to ensure multilingual datasets and script handling are properly supported

> *Note on scope: While the W3C and relevant AI standards bodies are responsible for web and application-layer standards governing AI input handling, is responsible for this area, ICANN must catalyse encouraging the application of UA readiness criteria within the systems and platforms that interface with the DNS.*

2. DNS Ecosystem and End-to-End Compliance (Guidelines 8 & 9)

Gap: UA failures often occur downstream due to hardcoded ASCII validation and lack of interoperability across systems.

Recommendation:

- Integrate UA compliance benchmarks into registrar accreditation and evaluation processes
- Develop standardized open-source libraries for validation, linkification, and authentication

3. EAI and Protocol Considerations (Guideline 21)

Gap: While EAI falls under IETF's remit, it directly impacts UA adoption.

Recommendation:

- Acknowledge EAI dependencies and promote collaboration with IETF to address cross-script delivery challenges

> *Note on scope: While the IETF is responsible for EAI protocol standards (RFC 6531 and related), is responsible for this area, ICANN must catalyse outreach to registries, registrars, and application developers to improve EAI adoption within the DNS ecosystem.*

4. Security Considerations

Gap: Inconsistent UA handling introduces risks such as homograph attacks and logging failures.

Recommendation:

- Include secure parsing, normalization practices, and threat awareness in UA training programs

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D. Inclusion & Validation

UA success must measure impact on marginalized users in resource-constrained settings (~500M APAC on 2G/3G). Institutional self-reporting overlooks regional inclusion gaps, rural limits, economic effects, grassroots monitoring.

1. Hardware Input Gaps (General Guideline 1)

Current: "Define what it means to be fully UA-ready... broader technology stack and associated dependencies on internationalization standards..."

Gap: Backend focus ignores input layer -70% India users rely on transliteration (Hinglish) due to poor native-script keyboards, limiting IDN adoption despite backend support.

Recommendation:

- After "internationalization standards and technology", insert: "While not charter remit, explicitly include hardware/OS input mechanisms for accessible native-script typing/transliteration to enable practical IDN use."

Rationale: Input = UA prerequisite; future-proofs definition.

2. Rural Low-Resource Failures (Guidelines 27-30)

Current: Guideline 28 "out-of-the-box solutions... default configurations"; Guideline 29 "build capacity... showcase testbeds".

Gap: Assumes stable infra/lab testing; misses rural realities (Punjab/Java: aging shared devices, unstable 2G/3G ~40% India users).

Recommendation:

- 2a (Guideline 28): After "deployment/maintenance", insert: "Mandate lightweight offline UA validation libraries for exclusion scenarios likely under A) 2G/3G networks (500M users), B) aging shared devices, C) offline-online transitions (UPI Gurmukhi timeouts, Javanese banking crashes)."

- 2b (Guideline 29): After "showcase testbeds", insert: "Include specialized rural deployment checklists for Global South capacity building."

EAI: "While IETF remit, UA-related via app pre-validation; recommend joint outreach."

3. Women-Led Commerce Exclusion (Guideline 10, Charter Q1)

Current: Prioritizes "educational systems...".

Gap: Ignores APAC women-led platforms (~50M micro-entrepreneurs); IDN failures block revenue (Haryanvi .in crashes, Thai LINE email rejection).

Recommendation:

- After "educational systems", insert: ""women-led digital economy platforms", ensuring end-to-end UA flows (account creation to product listing to payments to receipts) support native scripts."

Rationale: Economic exclusion compounds; extends prioritization logically.

4. Youth-Led Validation (Guidelines 42-45, Charter Q10)

Current: "Self-reporting... collaborators".

Gap: Registry bias misses downstream (Aadhaar backend Devanagari OK, frontend IDN fail). Youth document ground-truth.

Recommendation:

- After "self-reporting mechanisms", insert: "Complement with National IGF youth chapters as partners for real-time surveys/reporting, weighted equally to surface hyper-local gaps."

Rationale: Grassroots data fills institutional blind spots.

Conclusion

Overall, NetMission.Asia and the APAC youth community support the Draft Guidelines and encourage ICANN org to finalise them with a stronger emphasis on end-user outcomes, enforceable accountability and a clearly defined division of roles across the global Internet governance ecosystem. ICANN's most consequential contribution to UA adoption is not

technical standard-setting, the responsibility that belongs to IETF, W3C, and the Unicode Consortium, but the exercise of its contractual authority over the DNS registration ecosystem, its convening power across the multistakeholder community and its credibility as an organisation that leads by internal example. The Internet works for all users, in all languages and scripts, only when every actor in this ecosystem understands and fulfils its specific role.

Contributors

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