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India- Linguistics Scenario

Large Linguistic Diversity

- 22 Scheduled languages – including 3 written from right to left (Urdu, Sindhi, Kashmiri)

- 11 Major scripts

  o One script: many languages

    -Devanagari – Hindi, Marathi, Konkani, Rajasthani, Sindhi, Nepali, Dogri, Santhali , etc.

  o One language: many scripts

    - Konkani is written in Roman, Devanagari, Malayalam and Kannada.

- Hundreds of dialects.

India is a multilingual country, and approximately 90% of the population speaks a language other than English.

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India's Role- IDN ccTLD's

India has one of the largest IDN ccTLD sets globally.

- 15 IDN ccTLDs, covering 22 Indian languages represented using 11 scripts

- Study of RFC's

- Language Policies for Indian Languages

- Participation and contribution in ICANN's Variant TLD Program.

- Implementation of Universal Acceptance & Multilingual Internet Roadmap of India

Policy-level recognition of multilingual internet

- **Digital Brand Identity Manual (DBIM)** - As per DBIM (Para 7.5.2, Point (iv)) under "Recommendations for Multilingual User Experience", Government websites are advised to provide IDN URLs for each supported language to ensure a consistent and user-friendly multilingual experience.

- The **Rights of Persons with Disabilities (RPwD) (Amendment) Rules, 2023** – Accessibility Standards on ICT Products and Services, under Clause 5.10.1, also promote the adoption of internationalised domain names.

- Mandatory IDN domain Registration (.GOV.IN Policy) by NIC.

BhashaNet: Knowledge Dissemination Portal for UA and Multilingual Internet

Launched: 21 March 2024 by the Ministry of Electronics and Information Technology (MeitY) & National Internet Exchange of India (NIXI) at the Universal Acceptance Day Event; Implemented by Centre for Development of Advanced Computing (CDAC)

Purpose:

- To support our developer community and help them in making websites UA ready.
- Increasing awareness and adaptation of Universal Acceptance (UA) initiatives in India.
- To strengthen the ecosystem of UA and promote the adoption of Multilingual Internet-ready solutions in India.

Kindly Visit the Host booth for further details.

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Advancing Universal Acceptance: BhashaNet

BhashaNet: Knowledge Hub for UA Technical Enablement.

TECHNICAL REPOSITORY

Repository of technical documents, guidelines, practices, sample codes, and tutorials related to IDN and Universal Acceptance.

MULTI-LINGUAL UA READY PORTAL

Multi-lingual UA Ready Portal with Domain Names in 22 Indian languages.

Acting as a reference implementation showcase.

IDN READINESS DASHBOARD

IDN Website Directory curated, verified list of live Indian-language domain websites that are UA-compliant.

Evaluates and tracks the UA readiness of websites.

TOOLS & UTILITIES

IDN Email syntax validator, Transliteration Facility, Script/Language detection.
Indian Language Keyboard for Typing, Top level domain (TLD) checker, Translation tools, etc.

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Advancing Universal Acceptance: SoPs for Developers

- Standard Operating Document prepared for IDN enablement for Govt of India Websites developed using different CMS like Drupal, Python, and Node JS along with generic SoP .

- Capacity building by providing technology specific SoP(standard operating procedure / guides), technical resources / video talks, tools, sample code, test-cases, technical support, etc.

Advancing Universal Acceptance: Bhashanet

IDN Support to Ministries

- Various Ministries/Departments targeted for IDN Compliance

- Support for IDN enablement of various websites of the Government of India.

Examples of Multilingual domain registrations in India

Domain Name	Ministry / Department / State	English URL
https://आईआईजीएफ.भारत/	National Internet Exchange of India	https://indiaigf.in/
https://हिन्दी.विकासपीडिया.भारत/	Centre for Development of Advanced Computing (C-DAC)	https://en.vikaspedia.in/
https://एमओएसपीआई.सरकार.भारत/	Ministry of Statistics and Programme Implementation	https://www.mospi.gov.in/
https://पऊवि.सरकार.भारत/	Department of Atomic Energy	https://dae.gov.in/
https://दीपम.सरकार.भारत/	Department of Investment and Public Asset Management	https://dipam.gov.in/
https://एमएसडीई.सरकार.भारत/	Ministry of Skill Development and Entrepreneurship	https://www.msde.gov.in/
https://www.सीएसके.सरकार.भारत/	Indian Computer Emergency Response Team (CERT-In)	https://www.csk.gov.in/index.html
https://इंडिया.सरकार.भारत/hi/	Ministry of Electronics & Information Technology	https://www.india.gov.in/

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Challenges Encountered - IDN & UA is an ecosystem challenge, not a single-entity solution

- **Limited Awareness & Understanding of IDNs and UA:** Low familiarity across Government, developers, and digital stakeholders regarding Unicode domains, Punycode, and UA principles.

- **Inadequate Capacity Building & Documentation:** Insufficient training programs, practical implementation guidelines, SOPs, and developer-ready documentation for Web Information Managers.

- **Inconsistent UA Implementation Across Platforms:** Variations in support across frameworks (e.g., Drupal, WordPress, Python) and application stacks hinder uniform adoption.

- **Multi-Stakeholder Enablement Complexity:** IDN deployment requires coordination among DNS providers, hosting/cloud services, SSL providers, application teams, and security auditors.

- **Legacy Infrastructure & Security Readiness Gaps**: ASCII-centric firewalls, WAFs, email systems, and internal policies slow adoption and raise security/audit concerns.

- **Email & Software Ecosystem Compatibility Challenges:** Limited readiness of email systems and legacy software for full UA compliance affects end-to-end IDN usability.

THANK YOU !!!