ccTLD Services

NeuStar

ICANN Los Angeles

October 2007

- Context of ccTLDs

- Launch Services

- IDNs

- Primary/Secondary DNS

- Registry Gateway

- Other Services

ccTLD Context

- A digital national asset

- As unique as the host nation; wide variation in

  – Goals

    - Revenue source

    - Growing local commercial sector

    - Growing local technical capabilities

  – Policies

    - Registration restrictions

    - Documentation

  – Registrar communities

- Technical expertise and resources

  – Personnel and infrastructure

Launch Services

- Policy development
  - Balancing growth with local concerns
- Intellectual Property Claims
  - Precursor to Sunrise
  - States claim to a name
- Sunrise
  - Trademark variations
  - Derivative names
  - Intellectual property documentation
  - "First past the post"
  - Auctions
- Landrush
  - Scalability, Experience, Innovation
- Registrar market reach

IDN – Technical and Policy

- ## Language tables
  - .BIZ (Timeline, per-language)
  - Consistent with IANA language tables

- ## Reserved names
  - Conservative; i.e. reserve more

- ## Bundling
  - E.g.: RFC 3743 (JET) and RFC 4713 (CDN)

- ## Policy
  - Active in ccNSO and gNSO IDN WG

- ## Advanced i18n needs

  - eXtensible Resource Identifiers

  - Registry Model Customizations

- ## Future

  - Bidi languages

  - IDNA200x

- ## Open Source Project

  - EchIDNA

  - Preparation for IDNA200x

DNS Solutions

- Extensive qualifications
  - Infrastucture provider for over 30 {cc,s,g}TLDs
  - Manage ~25 million domains, over 20% of global market
  - Network processes over 175 billion queries per month
- Primary or secondary DNS capabilities
- Flexible update interface from Registry: XML API or IXFR/AXFR
  - Changes propagated globally in ~2 minutes
- Customized TLD network, separate from enterprise customers
- Custom infrastructure solutions available
  - Anycast of TLD-controlled IP addresses
  - Disaster recovery solution
  - Real-time enablement of NeuStar infrastructure for high-volume periods
- Advanced features
  - DNSSEC, IPv6, IDN, ENUM

Current Data Centers (14)

- **North America**
  - California (2)
  - Illinois
  - Virginia
  - New York
  - Florida
  - Texas
- **Europe**
  - Luxembourg
  - UK
- **Australia**
  - Sydney
- **Africa**
  - South Africa
- **Asia**
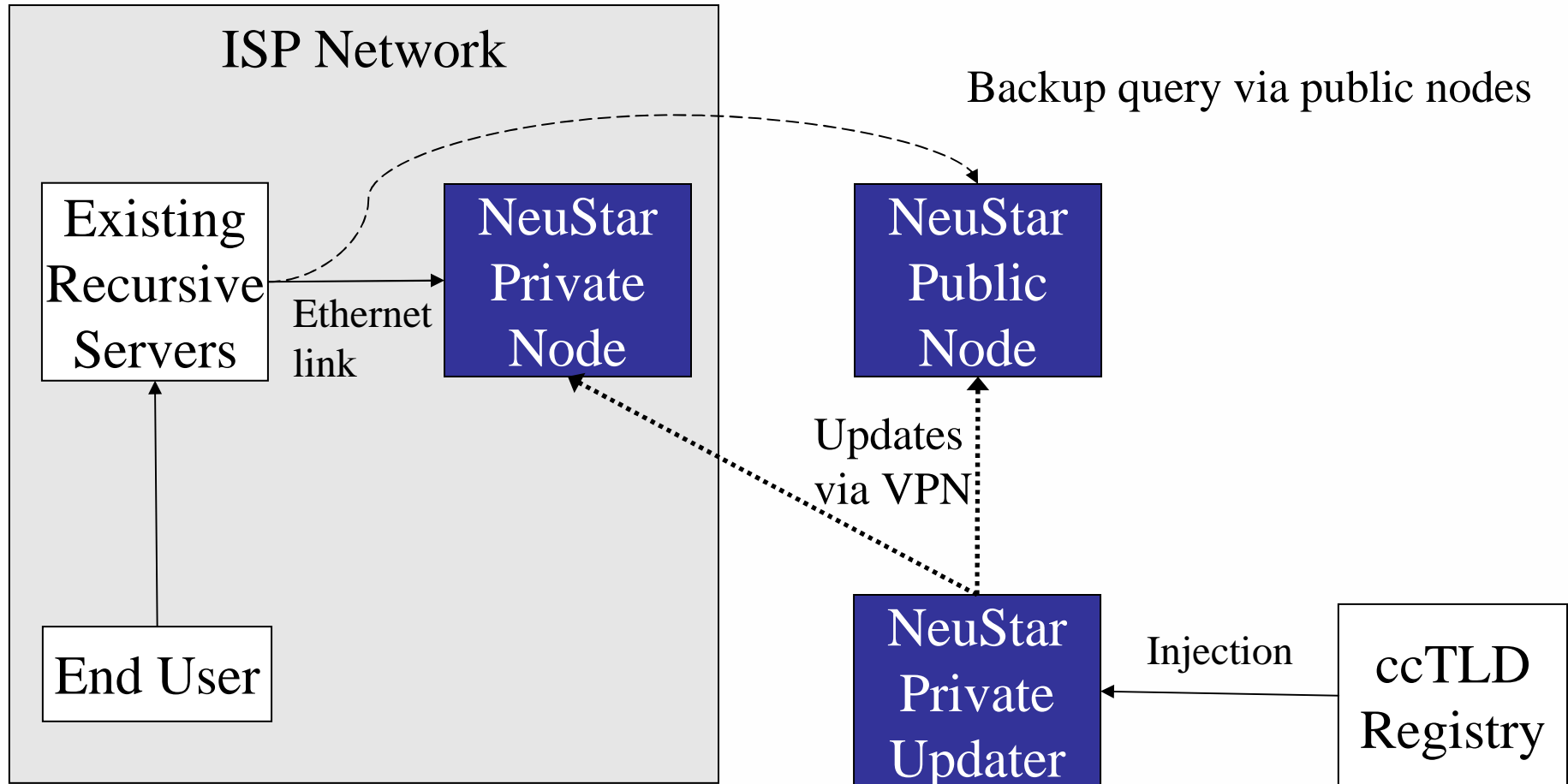 - India
  - Hong Kong
  - China

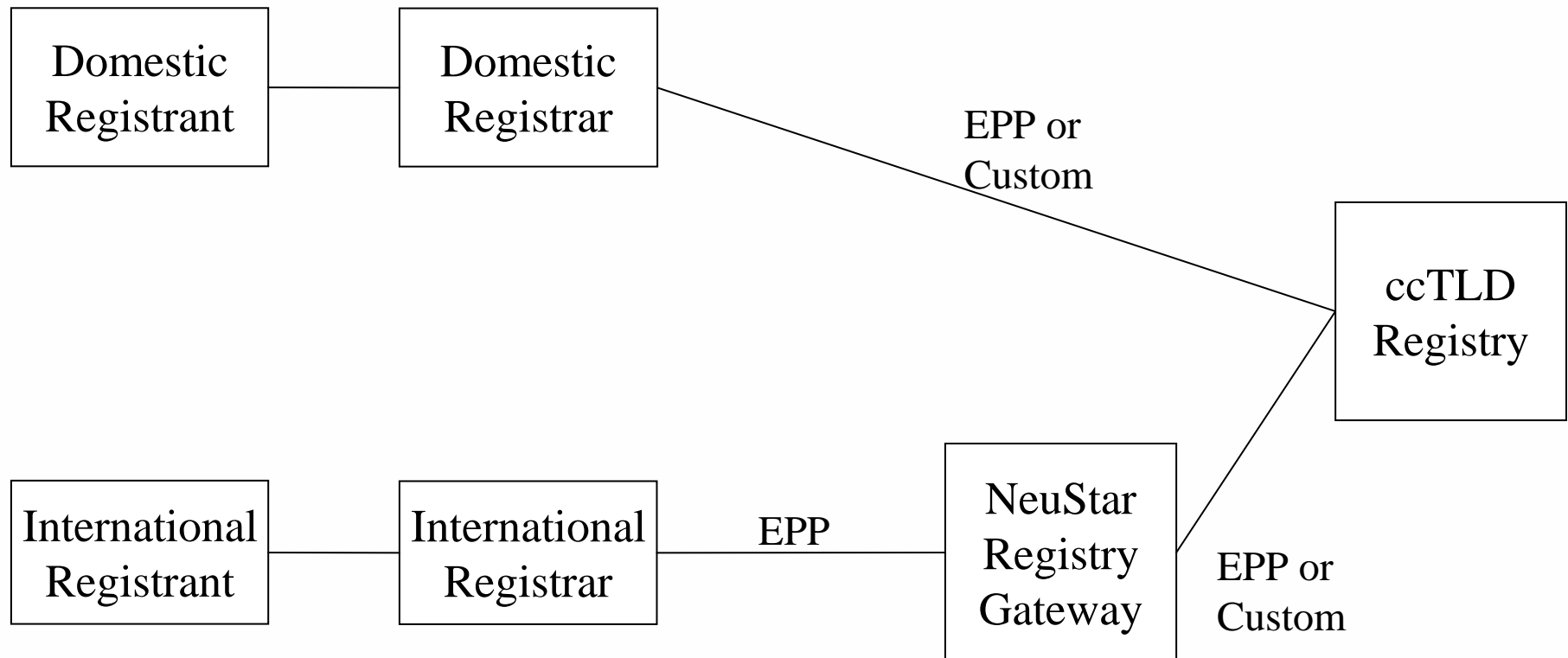Planned Expansion

- **South America**

- Top global ISP/network providers
  - AOL, EarthLink, Cablevision, Qwest, Yahoo!, etc

- Private nodes within ISP/network infrastructure
  - Inaccessible to public internet
  - Accessible only to trusted recursive servers

- Service providers create and maintain ACLs
  - Forms a protected environment for query/response traffic

- Partners have two or more authoritative private nodes
  - Utilize Anycast
  - Connected privately to update infrastructure

ISP Network

Backup query via public nodes

Existing Recursive Servers

Ethernet link

NeuStar Private Node

NeuStar Public Node

Updates via VPN

End User

NeuStar Private Updater

Injection

ccTLD Registry

- ccTLD maintains authoritative database

- ccTLD gains:

  – Instant access to global registrar community

  – Protocol adaptation

  – Operating efficiency

- NeuStar provides all Registrar support

  – Phone/email

  – Billing

- Enables cross-sell opportunities for registrars

  – Increased convenience for registrants

Domestic Registrant — Domestic Registrar

EPP or Custom

ccTLD Registry

International Registrant — International Registrar

EPP

NeuStar Registry Gateway

EPP or Custom

- .CN Registry Gateway
  - Launched in late 2002
  - 75 Registrars
  - Over 140,000 names
- .TW Registry Gateway
  - Launched in early 2004
  - 41 Registrars
  - Over 30,000 names

- **Private ENUM**
  - Tier 1/2 and SIP/VoIP signaling

- **Mobile IM**
  - Community and interoperability solutions

- **Resource Administration**
  - Numbering (telephone)
  - Short codes (SMS)

- **Number portability**
  - fixed and mobile

- **Identity and XRI/iNames**

Questions?