LISP CHARTER

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Concerns to Address

- Accurately describe what LISP separates
- Describe properties of EIDs
- Discuss overlapping EIDs and RLOCs

Changes Made Since External Review

- End-site identifier as expansion of EID
- Add basic design constraints of LISP (no host changes, few routers need to understand LISP, incremental deployability)
- identity/identification

Concerns with Changes

- Objection to end-site identifier
- Discussion about identity/identifier
- Concerns about EID description being inaccurate
- Discussion about whether EIDs and RLOCs can ever overlap.

New text was sent to the LIST today that hopefully resolves these concerns.

CHARTER (1)

The IAB's October 2006 workshop on Routing and Addressing Workshop (RFC 4984) rekindled interest in scalable routing and addressing architectures for the Internet. Among the many issues driving this renewed interest are concerns about the scalability of the routing system and the impending exhaustion of the IPv4 address space. Since the IAB workshop, several proposals have emerged which attempt to address the concerns expressed there and elsewhere. In general, these proposals are based on the "Locator/Identifier separation". The IAB's October 2006 workshop on Routing and Addressing Workshop (RFC 4984) rekindled interest in scalable routing and addressing architectures for the Internet. Among the many issues driving this renewed interest

are concerns about the scalability of the routing system and the impending exhaustion of the IPv4 address space. Since the IAB workshop, several proposals have emerged which attempt to address the concerns expressed there and elsewhere. In general, these proposals are based on the "Locator/Identifier separation".

CHARTER (2)

The basic idea behind the separation that the Internet architecture combines two functions, Routing Locators, (where you are attached to the network) and Identifiers (who you are) in one number space: The IP address. Proponents of the separation architecture postulate that splitting these functions apart will yield several advantages, including improved scalability for the routing system. The separation aims to decouple locators and identifiers, thus allowing for efficient aggregation of the routing locator space and providing persistent identifiers in the identifier space.

CHARTER (3)

LISP supports the separation of the Internet address space following a network-based map-and-encapsulate scheme (RFC 1955). In LISP, both identifiers and locators are IP addresses. In LISP, identifiers are composed of two parts: a "global" portion that uniquely identifies a particular site and a "local" portion that identifies an interface within a site. The "local" portion may be subdivided to identify a particular network within the site.

CHARTER (5)

For a given identifier, LISP maps the "global" portion of the identifier into a set of locators that can reach the identified interface; as a consequence a host would typically change identifiers when it moves from one site to another or whenever it moves from one subnet to another within an site. Typically, the same IP address will not be used as an identifier and locator in LISP.

LISP requires no changes to end-systems or to most routers. LISP aims for an incrementally deployable protocol.

CHARTER (6)

A number of other approaches are being looked at in parallel in the IRTF and IETF. At this time, these proposals are at an early stage. All proposals (including LISP) have potentially harmful side-effects to Internet traffic carried by the involved routers, have parts where deployment incentives may be lacking, and are NOT RECOMMENDED for deployment beyond experimental situations at this stage. Many of the proposals have components (such as the EID-to-RLOC mapping system) where it is not yet known what kind of design alternative is the best one among many.

CHARTER (7)

However, despite these issues it would be valuable to write concrete protocol specifications and develop implementations that can be used to understand the characteristics of these designs. The LISP WG is chartered to work on the LISP base protocol (draft-farinacci-lisp-12.txt), the LISP+ALT mapping system (draft-fuller-lisp-alt-05.txt), LISP Interworking (draft-lewis-lisp-interworking-02.txt), LISP Map Server (draft-fuller-lisp-ms-00.txt), and LISP multicast (draft-farinacci-lisp-multicast-01.txt) for these purposes, with the given drafts as a starting point.

CHARTER (8)

The working group will encourage and support interoperable LISP implementations as well as defining requirements for alternate mapping systems. The Working Group will also develop security profiles for the ALT and/or other mapping systems.

CHARTER (9)

It is expected that the results of specifying, implementing, and testing LISP will be fed to the general efforts at the IETF and IRTF (e.g., the Routing Research Group) that attempts to understand which type of a solution is optimal. The LISP WG is NOT chartered to develop the final or standard solution for solving the routing scalability problem. Its specifications are Experimental and labeled with accurate disclaimers about their limitations and not fully understood implications for Internet traffic. In addition, as these issues are understood, the working group will analyze and document the implications of LISP on Internet traffic, applications, routers, and security. This analysis will explain what role LISP can play in scalable routing. The analysis should also look at scalability

and levels of state required for encapsulation, decapsulation, liveness, and so on (draft-meyer-loc-id-implications).