Introducing radiant object theory

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Abstract

The development of peer media might benefit from a treatment of distributed object application spaces. The perspective offered is not a general review of peer media. The abstraction offered is intended to motivate development.

1 Background

In the X.400 [2] paradigm the ITU established a static binary form to communicate well defined messages. In the MIME [1] paradigm then IETF established a textual form to communicate transparently in a message object finitude. In the first case we find the conservation of definition. And in the second case we find the conservation of transparency.

To conserve transparency in the textual case of MIME standards is to contrast and compare fabrication, production, and consumption processes. The obscurity that X.400 products fall prey to is an opacity due to tooling. The complexity that MIME products are victims of is alternative.

Neither has avoided interference in the affairs of communication. However, fidelity to human ideals of transparency and facility is well served by the IETF simplicity. With textual transparency and technical reproducibility the retreat to obscurity is elided.

These are matters of practice. How establishment evolves to the sustenance of humanity or the exploitation of inhumanity. The ITU paradigm was by far the more perfect establishment, however that establishment has allowed those retreats to obscurity that defeat technical reprodicibility.

2 Theory

The matters of theory are spatial and temporal. The spatial logics of digital resources and communication, and the temporal logics of spatial objects and processes. Spatially systemic and universal. Temporally immediate and remote.

When a spatial communication distinction is terrestrial or interplanetary [3], the systemic spatial interest becomes consumption.

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When extreme consumption is not a focus of concern, the textual reproduction standards become interesting. This may be the case of peer media.

3 Structure

The peer media as inclusive of mobile devices is characterized by the contact internetworking of trust relationships. In this conception, the structure of applications is *ad hoc*, and the distribution of objects as compose dictionaries of name spaces is not ordinary but partial. It is the identity of individuals and automata and credentials that are unique by proof.

The *partial object distribution* ($\omega\delta$) over *trust relational connectivity* ($\tau\kappa$)

$$\frac{\omega\delta}{\tau\kappa}$$

represents a class of peer media in the spatio-temporal logic of information and communication. In comparison, the ordinary or *probable object distribution* ($\pi\delta$)

$$\frac{\pi\delta}{\tau\kappa}$$

integrates reachability and distribution as objective.

$$\frac{\omega\delta}{\tau\kappa} \leq \frac{\pi\delta}{\tau\kappa}$$

In probable object distribution ($\pi\delta$), a distributed object of information is replicated (*e.g.* by a factor of three) so that *reachability* ($\rho\delta$) is practical and probable.

$$1 \geq \frac{\rho\delta}{\tau\kappa}$$

In partial object distribution ($\omega\delta$) reachability may be impractical (*i.e.* probability nil).

$$0 \leq \frac{\rho\delta}{\tau\kappa}$$

4 Topology

The social network of trust accept and reject relations benefits from the package model of mechanical interaction. Interaction is performed in isolation from communication as an operational sequence at a package endpoint (peer). The package model raises network reachability from impractical (probability nil) to possible (probability nonzero).

$$0 < \frac{\rho\delta}{\tau\kappa} \leq \frac{\rho\nu}{\tau\kappa}$$

The social trust network with contact routing has reachability ($\rho\nu$). The static node link degree is quantified as

$$N_s = |\tau\kappa|,$$

and the dynamic node link degree is quantified as

$$N_d = |\lambda\kappa|.$$

Therefore topological hop count is represented as

$$\frac{\lambda\nu}{\tau\kappa}.$$

And

$$\frac{\rho\delta}{\tau\kappa} \sim \frac{\lambda\nu}{\tau\kappa}.$$

5 Future work

Parametric topological reachability.

References

[1] Ned Freed and Nathaniel S. Borenstein. Multipurpose internet mail extensions (mime) part one: Format of internet message bodies. RFC 2045, RFC Editor, November 1996.

[2] International Telecommunication Union. Message handling system and service overview. ITU-T X.400, June 1999.

[3] K. Scott and S. Burleigh. Bundle protocol specification. RFC 5050, RFC Editor, November 2007.