Introducing radiant object vectors

John D.H. Pritchard *

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Abstract

Radiant object theory [1], topology [6], applications [2], continuity [3], security [5], and integrity [4] opened a perspective on social peer trust networks. Radiant object vectors is an evolution of that examination of distributed objects.

1 Structure

A unique producer of distributed objects collects production sets ordered in time. Likewise, application sets may be collected by a method of curation, or automated. Each member of a set is a unique object or vector, by instance or reference, local or remote.

A vector member reference may include metadata. Generally, vector member relations including comparison and order are in member object metadata.

A producer of radiant objects is a member of a social peer trust network [1]. A traditional trust application [2, 4] colors trust as white, distrust as black, and uncertainty as gray. White listed producers are members of social peer trust networks, and black listed producers are excluded from social peer trust networks.

2 Identity

A vector and object have equivalence of referential identity (κ) and metadata, including the properties and attributes of production and origin ($\sigma + \iota$).

$$\kappa = \sigma + \iota$$

3 Existence

A vector and object have equivalence of referential existence (ϵ). Any vector or object has referential reachability (ρ) as well as a referential indeterminancy (ν). A reference may refer to a set or object that remains to be retrieved, completed, or updated.

$$\epsilon = \rho + \nu$$

*@syntelos, logicalexistentialism@gmail.com

4 Continuity

The membership relation ($\mu\kappa$) over a vector ($\epsilon\kappa$) is partial.

$$0 \leq \frac{\mu\kappa}{\epsilon\kappa} \leq 1$$

A vector (subset) is continuous when its membership is contiguous and complete.

5 Consistency

Any relation over a vector ($\phi\kappa$) is partial.

$$0 \leq \frac{\phi\kappa}{\epsilon\kappa} \leq 1$$

Ideally, the relation (ϕ) and object (κ) are enumerable as are the elements of comparison. An enumerated set is complete. A relational specification set agrees with a relational production set by equivalence of membership to prove consistency by demonstration.

In practice, however, enumeration is partial. Continuity is local. And, consistency is uncertain.

6 Notes

In use, consistency has the metaphysical character of the confidence of good faith. The conservation of metaphysical confidence demands the conservation of consistency as continuity.

References

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