

Exploring the Lorentz transform

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Abstract

The Lorentz transform converts the Euclidean storage format of dynamic geometric data into the corresponding observed spacetime format.

Lorentz transform

If one explores what a Lorentz transform does, then this leads to an amazing conclusion. It converts a Euclidean format of a dynamic geometric datum into the spacetime format of that same data. The original data is a combination of a proper timestamp and a three-dimensional location. It is the set of properties that an elementary particle characterizes at a given instant. The spacetime format is what observers perceive. They can only perceive data that comes from the past and that reaches them via vibrations and deformations of the continuum that embeds both the observed event and the observer. The continuum must obey the differential equations that describe its behavior. These differential equations limit the speed of transfer of information. Consequently, the information transfer must dilate duration and contract length. Therefore, the Lorentz transform becomes a hyperbolic transform.

Storage

In the above view, the instant that the entrance data set stores can be selected freely as long as that storage instant predates the stored timestamp. Thus it is possible to select the instant of storage the same for all stored data. That instant characterizes the instant of creation of the whole universe.

In this way, the Lorentz transform describes the conversion of the stored creation data into the data that observers can perceive. The observers travel with a time slit window that scans over the repository, which stores all dynamic geometric data of all elementary particles. Elementary particles are elementary modules that as a group configure all other modules and modular systems.

This view results in a model in which at the instant of the creation, the creator stored all dynamic geometric data in a repository. Observers travel in a time slit window and perceive data that arrive from their past.

Model

The continuum that embeds these observers transfer that information from the storage to the receivers. All observers are modules and the stored data concern properties of the elementary modules that constitute modules.

Quaternions perfectly suit as storage containers for the combination of a proper timestamp and a three-dimensional spatial location. A quaternionic separable Hilbert space can act as a structured repository for these storage containers. Each infinite

dimensional separable Hilbert space owns a unique companion non-separable Hilbert space that embeds the separable Hilbert space. It is possible to interpret the embedding process as an ongoing process that takes place in a time slit window that scans the combined Hilbert spaces.