

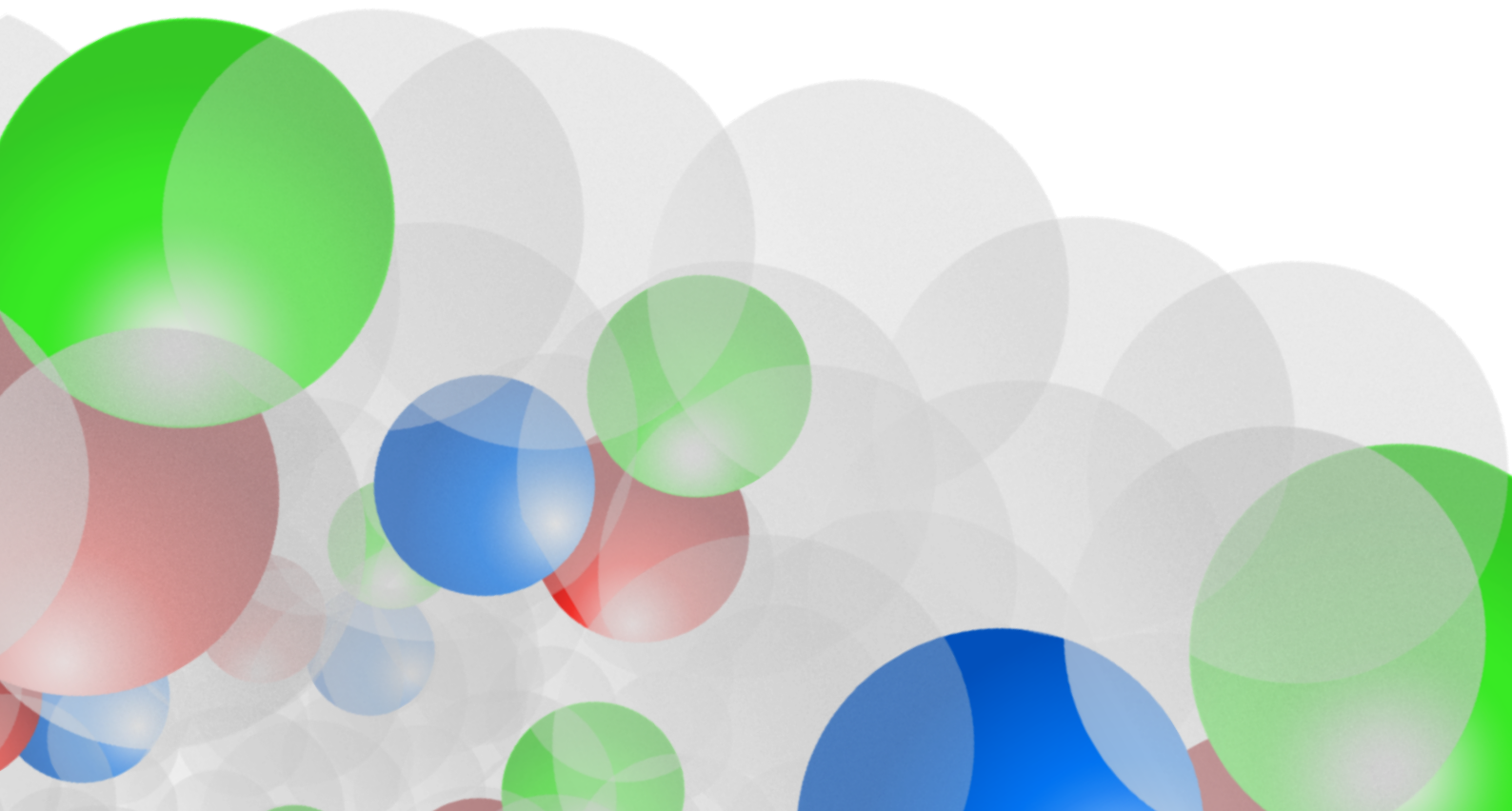
Fractal Quantum Space Model (FQSM)

A Foundational Ontological Model

Part 2 – Projection Architecture and Dynamics

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Version 1.0



Document history

Version	Date	Author	Contact	Changes
1.0	12 August 26	Frank Hafer	kontakt@akasha-interview.com	Document published.

Required documents

ID	Dokument	Version	Function
[1]	FQSM-Part-1-en_v1r01.pdf	1.1	Defines the ontological and geometric foundations of the FQSM.

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Abstract

The second part of the Fractal Quantum Space Model (FQSM) describes the fundamental projection mechanisms through which the determinations are transferred from the quantum layer to the subtle layer and the material layer. The focus is on the triadic coupling of the quantum points, the repeated projection of the determinations, and the resulting processes and interactions through which manifestations may arise.

The movable quantum points of the quantum layer described in the first part [1] are not part of the following considerations. In this part, only the fixed projecting quantum points of the quantum layer are considered.

Furthermore, it is described how displacements of manifestations can arise through the use of other projection pairs, without the quantum points moving within the quantum spaces.

Finally, the maximum speed of the ordinary displacement of a manifestation is derived from the properties of projection coupling and the fundamental projection rate. Subsequently, its relationship to the physical speed of light in a vacuum is described. Direct displacements to more distant projection pairs, which are fundamentally possible, are referred to as teleportation.

This second part thus extends the basic ontological structure developed in the first part to include the fundamental mechanisms of projection and lays the foundation for the description of further dynamic processes within the FQSM.

Notation

For the sake of simplicity, the following terms are used throughout the Fractal Quantum Space Model (FQSM). This table should be understood as an extension of the definitions of terms from the first part [1] of the FQSM.

Definitions of terms

Symbol	Meaning
FPR	Fundamental Projection Rate
d_QP	The distance between two adjacent quantum points on a projection surface. In the FQSM, this distance is equated with the Planck length l_p .
v_max	Maximum speed of ordinary spatial displacement
c	The speed of light in a vacuum

The symbols used are intended to provide a concise and consistent description of the relationships within the model. The notation will be expanded as required as the FQSM is further developed.

1. Axioms of the model

The Fractal Quantum Space Model (FQSM) is based on a set of fundamental axioms from which the subsequent model structures and mechanisms are derived. Axioms A1 to A9 were defined in the first part of the FQSM [1] and describe the ontological and geometric foundations of the model.

Axiom A10

The projection of a determination from the quantum layer onto a pair of projection is achieved by means of discrete projection pulses.

2. Basic concepts

The following basic terms define the fundamental concepts of the Fractal Quantum Space Model (FQSM). They form the basis for all further descriptions. The basic terms presented here expand on the list of terms from the first part [1] of the FQSM.

2.1. Projection Impulse

A projection impulse is a discrete event through which the determination of a projecting quantum point of the quantum level is projected onto the assigned projection pair.

2.2. Fundamental Projection Rate (FPR)

The Fundamental Projection Rate (FPR) refers to the rate at which a projecting quantum point of the quantum level generates projection impulses.

3. Projection Coupling

The fundamental triadic coupling forms the permanent basis assignment between a quantum point (QP) on the quantum layer (QL) and the projection pair assigned to it on the subtle layer (SL) and the material layer (ML).

Projection coupling enables the determination (DT) of the projecting QP of the QL to be projected onto the associated projection pair. The projection takes place simultaneously onto the QP of the SL and the QP of the ML.

A fundamentally projecting quantum point (FPQP) utilises the projection coupling assigned to it via the basis assignment on a regular basis. A manifesting quantum point (MQP) may temporarily utilise a projection coupling as part of a manifestation.

The basis assignment of the fundamental triadic coupling remains unchanged even during temporary utilisation by an MQP (see Figure 1).

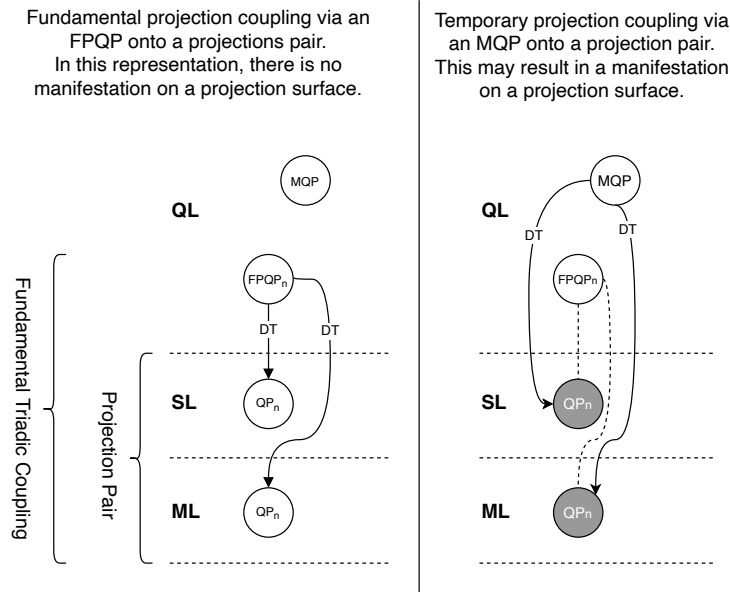


Figure 1: Fundamental and temporary projection coupling

3.1. Process of Projection Coupling

A projecting quantum point in the QL utilises projection coupling to project its DT onto the associated projection pair.

The projection takes place via a discrete projection impulse. In the process, the DT of the projecting quantum point present at the time of the projection impulse is projected onto the QP of the SL and the QP of the ML of the projection pair.

The QPs of the projection pair act as carriers of the projected DT. They process this within their respective quantum spaces (QS) in accordance with the laws governing those spaces. The processing of the DT may be influenced by interactions with other QPs within the respective QS.

The projection of the DT does not directly determine a specific manifestation. Which processes arise from this and which other QPs are involved depends on the laws governing the respective QS and the interactions occurring within it.

4. Fundamental Projection Rate (FPR)

The time interval between two consecutive projection pulses is denoted by Δt . The fundamental projection rate is given by the reciprocal of this time interval:

$$FPR = \frac{1}{\Delta t}$$

Where:

- FPR denotes the fundamental projection rate,
- Δt denotes the time interval between two successive projection impulses.

The fundamental projection rate thus performs the determination of the time interval between the projection impulses of a projecting quantum point.

4.1. Repeated Projection

A projecting quantum point of the quantum layer (QL) repeatedly projects its current determination (DT) onto the associated projection pair at the fundamental projection rate (FPR).

With each projection impulse, the DT present at that moment is projected once more. The DT contains the Fundamental Determination of the projecting QP and may be in an extended form. The renewed projection triggers the processing of the DT within the respective QS once more.

The processes triggered by previous projection impulses can continue to operate between the projection impulses and interact with the processes triggered by further projection impulses. Which processes arise from the processing of the DT and how they develop is determined by the laws and interactions of the respective QS.

5. Speed of Ordinary Spatial Displacement

An ordinary spatial displacement of a manifestation occurs through the successive use of neighbouring projection pairs. The switch to a different projection pair can only take place by means of a projection impulse.

If the nearest projection pair is utilised with each successive projection impulse, the spatial displacement step corresponds to the distance between neighbouring projection pairs and thus to the distance between two neighbouring quantum points on a projection surface d_{QP} . In the FQSM, the following applies to this distance:

$$d_{QP} = l_p$$

If the time interval between two consecutive projection pulses is Δt , the maximum possible velocity of ordinary spatial displacement is given by:

$$v_{max} = \frac{d_{QP}}{\Delta t}$$

Since the following applies to the frequency of the projection impulses:

$$FPR = \frac{1}{\Delta t}$$

as follows:

$$v_{max} = d_{QP} * FPR$$

Taking into account the equality assumed in the FQSM between d_{QP} and the Planck length l_p , this gives:

$$v_{max} = l_p * FPR$$

Where:

- v_{max} denotes the maximum velocity of an ordinary manifestation,
- d_{QP} denotes the distance between two adjacent QPs on a projection surface, which in the FQSM is equated with the Planck length l_p ,
- Δt denotes the time interval between two successive projection impulses,
- FPR denotes the fundamental projection rate.

The maximum velocity described here applies to the special case in which each projection impulse results in a displacement to the nearest projection pair. A projection need not result in a displacement with every projection impulse.

5.1. Relationship to the speed of light

The maximum velocity of a manifestation's displacement is equated with the physical speed of light in a vacuum:

$$v_{max} = c$$

With

$$v_{max} = d_{QP} * FPR$$

this gives:

$$c = d_{QP} * FPR$$

Since, in the FQSM, the distance between two adjacent quantum points of a projection surface is assumed to be equal to the Planck length l_p , the following applies:

$$c = l_p * FPR$$

Where:

- c denotes the physical speed of light in vacuum,
- d_{QP} denotes the distance between two adjacent QPs of a projection surface, which is assumed in the FQSM to be equal to the Planck length l_p ,
- FPR denotes the Fundamental Projection Rate.

Thus, the equality $v_{max}=c$ establishes the connection between the maximum velocity of ordinary spatial displacement determined by the projection architecture and the physically observed speed of light in vacuum.

The speed of light is not independently derived from the axioms of the FQSM. Rather, the maximum velocity determined by the projection architecture is equated with the known speed of light.

5.2. Teleportation

In principle, a projection impulse can also be used to target a projection pair that is further away, without using the intervening projection pairs one after the other. Such a direct displacement is referred to as teleportation.

6. Displacement and Manifestation

The displacement of a manifestation does not occur through any movement of the quantum points involved. The quantum points of the projection surfaces remain permanently at their positions within the respective quantum spaces.

In the event of a displacement, a projection coupling to another projection pair is temporarily utilised for the manifestation. The permanent basis assignment of the fundamental triadic coupling remains unchanged in the process. In the case of maximum incremental repositioning, the next nearest projection pair is utilised with each consecutive projection impulse.

The specific form and change of a manifestation are governed by the laws of the respective quantum space and the interactions occurring there.

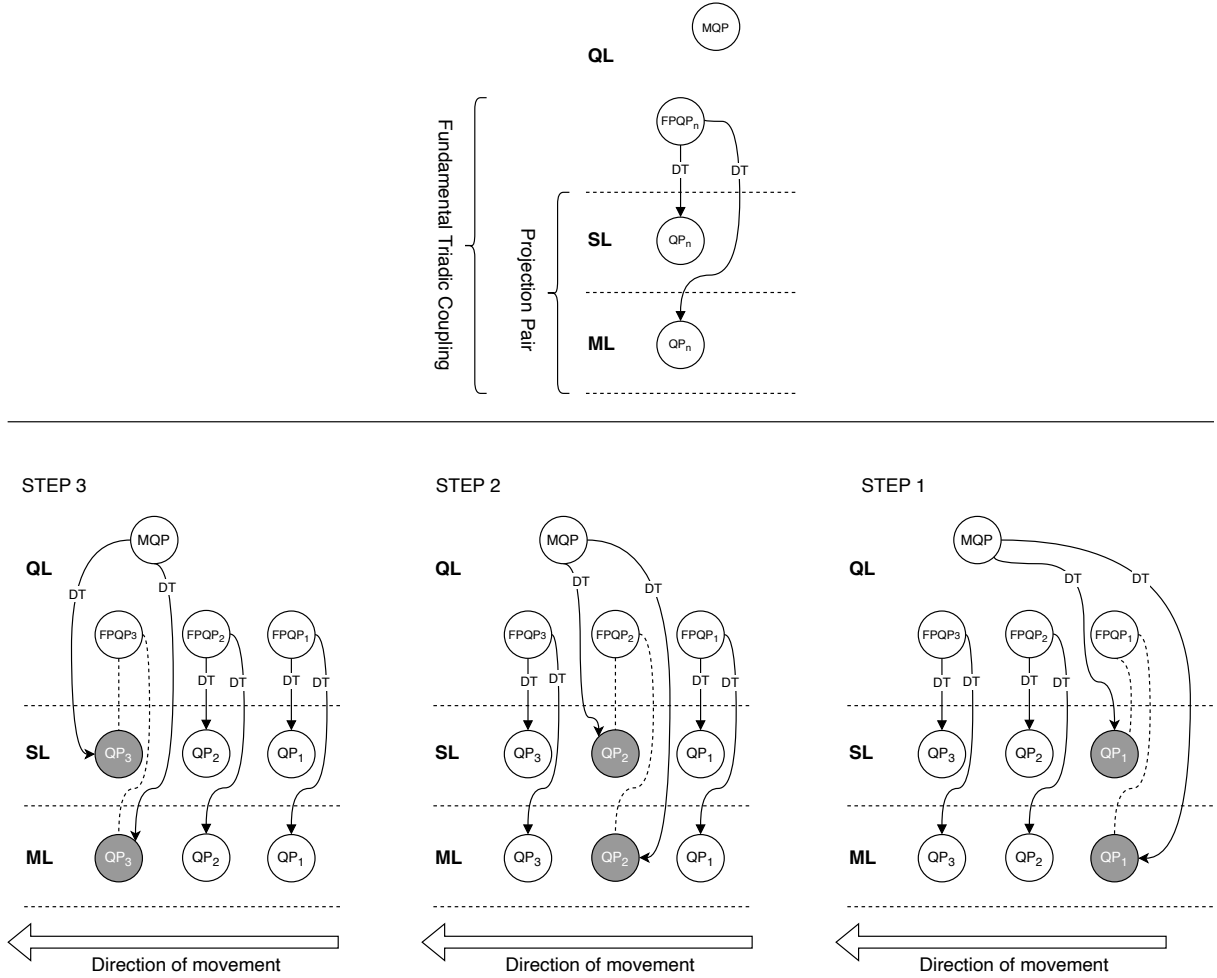


Figure 2: Relocation of a manifestation using an MQP

Figure 2 shows that a manifestation can be displaced by successively utilising different projection pairs along the direction of movement. The quantum points themselves remain fixed. An MQP's utilisation of a different projection pair in each instance is governed by the conditions applicable to the movement and does not necessarily occur with every projection impulse.

6.1. Processing of the projected determination

The projected determination (DT) is processed within the respective quantum space (QS) in accordance with its laws. The DT thereby constitutes the specification for processing by the selected QP.

The processing of the DT can trigger processes within the respective QS. These processes may be influenced by interactions with other QPs in the QS and may involve further QPs in the resulting processes.

Which processes arise from the processing of the DT and how they develop is determined by the laws governing the respective QS and the interactions occurring within it.

6.2. Behaviour between projection impulses

There is no further projection of the DT between two projection impulses. However, the processes triggered by previous projection impulses may continue to operate within the respective QS.

These processes may change in accordance with the laws governing the respective QS and may be influenced by interactions with other QPs. In the process, further processes may arise and additional QPs may become involved in the events.

With the next projection impulse, the DT present at that moment is projected once more and processed within the respective QS. This may re-stimulate the existing process or trigger further processes.

The development of the processes occurring between projection impulses is therefore not part of the projection itself, but results from the processing of the DT and the laws and interactions of the respective QS.

6.3. Temporary projection coupling

A manifesting quantum point (MQP) of the quantum layer (QL) may, within the context of a manifestation, temporarily utilise a projection coupling to a projection pair of a fundamental triadic coupling. During this temporary use, the MQP projects its current determination (DT) onto the projection pair. The projection takes place via discrete projection impulses.

The basis assignment of the projection pair to the fundamental projecting quantum point (FPQP) remains unchanged during this temporary use. The QPs of the projection pair remain permanently in their respective QSs and retain their positions.

During temporary utilisation by the MQP, the FPQP does not utilise the projection coupling. Once temporary utilisation has ended, the FPQP can once again utilise the projection coupling assigned to it via the basis assignment.

7. Summary

The second part of the FQSM describes the fundamental mechanisms of projection within the fundamental triadic coupling. The determination (DT) of a projecting quantum point of the quantum layer is projected onto the assigned projection pair by means of discrete projection impulses. The Fundamental Projection Rate (FPR) determines the temporal rate of the projection impulses.

The QPs of the projection surfaces act as carriers of the projected DT. Their processing follows the laws governing the respective QS and may be influenced by interactions that occur.

A fundamentally projecting quantum point (FPQP) regularly utilises the projection coupling assigned to it via the basis assignment. A manifesting quantum point (MQP) may temporarily utilise this projection coupling within the context of a manifestation. The basis assignment of the fundamental triadic coupling remains unchanged by this.

The geometric arrangement of the QPs remains unchanged. Any possible displacement of position affects the utilisation of the projection coupling and not the position of the QPs themselves.

For the maximum speed of the ordinary spatial displacement in a manifestation, the following relationship applies when successive nearest projection pairs are utilised:

$$v_{max} = d_{QP} * FPR$$

In the FQSM, d_{QP} denotes the distance between two neighbouring quantum points on a projection surface, which is equated with the Planck length l_p .

Equating the maximum velocity of ordinary spatial displacement with the speed of light in a vacuum yields:

$$c = d_{QP} * FPR$$

In principle, a more distant projection pair can also be directly targeted without successively using the projection pairs in between. This form of spatial displacement is referred to as teleportation.

The specific dynamic processes that arise from the processing of the projected DT and the interactions within the QS are described in the next part of the FQSM.