13:07:25 From Camilo Osejo-Bucheli : does anyone know whether Beer was familiar with descriptive geometry? 13:09:48 From Peter D Tuddenham : How can we make/create or aet hold of the the 3 dimension VSM model you just presented? From John Waters : Refreshingly well-paced. 13:10:57 Nevertheless, although this is by far the most helpful thing I've yet seen on this topic, I'm going to have to re-watch this many times before I can begin to digest what I need from it. (For now, this has been extremely enjoyable.) From markus.schwaninger@unisg.ch : Joe, could you 13:11:39 elaborate on the distinction of 'structure' and 'form' From Trevor Hilder : Bing Chat says: 13:11:40 From Trevor Hilder : Descriptive geometry is the 13:11:42 branch of geometry which allows the representation of threedimensional objects in two dimensions by using a specific set of procedures. The resulting techniques are important for engineering, architecture, design and in art. The theoretical basis for descriptive geometry is provided by planar geometric projections<sup>1</sup>. Descriptive geometry uses the image-creating technique of imaginary, parallel projectors emanating from an imaginary object and intersecting an imaginary plane of projection at right angles. The cumulative points of intersections create the desired image<sup>1</sup>. I hope this helps. Let me know if you have any other questions. Source: Conversation with Bing, 03/05/2023 (1) Descriptive geometry - Wikipedia. https://en.wikipedia.org/wiki/ Descriptive\_geometry. (2) Descriptive geometry Definition & Meaning - Merriam-Webster. https://www.merriam-webster.com/dictionary/descriptive%20geometry. (3) What is descriptive geometry in architecture? - Our Planet Today. https://geoscience.blog/what-is-descriptive-geometry-in-architecture/. (4) Basic Concepts of Descriptive Geometry - Carnegie Mellon University. http://www.contrib.andrew.cmu.edu/~ramesh/teaching/course/ 48-175/lectures/2.BasicsOfDescriptiveGeometry.pdf. 13:11:44 From mikev : You have just defined your workshop for Manchester, Peter. :) From Camilo Osejo-Bucheli : Reacted to "Descriptive 13:14:33 geometry..." with 👍 13:15:14 From Raul Espejo : want to understand the way you relate the structure to the environment... and produce democracy in the relationship From Barbara : Agreed, John. This was also for me the 13:15:17 clearest presentation on the subject to date, but it remains dense and will require more reflection and digestion before I can apply it to anything. Thank you, Joe, this was a wonderfully structured window on what it is vast and complex subject. From jonli : This is about "topology" mathematics. 13:15:35 13:16:30 From Camilo Osejo-Bucheli : Reacted to "want to

understand t..." with 👍 13:16:58 From Allenna Leonard : I've been asked if the VSM and TS could be considered pattern languages (all Chris Alexander). What would you say? 13:18:39 From mikev : How would one use this 'metaarchitecture' in relation to a recursive unfolding of infosets and the VSM logic? In the sense of 'viral' organisations which also maintain sufficient cohesion between pairs of levels of recursion. From Dr. Leonie : Joe, If a building is constructed 13:19:23 based on the structures you have inter-connectively layered on top of each other, how does one physically climb up and down the structure. 13:25:02 From jonli : 1st round 60%, 2nd round 80%, 3rd round 95% resonance From Jeremy Gross : Rectangular coordinates persist 13:26:07 because it is very easy to do calculus on rectangular coordinates. Every other coordinate system presents different challenges to doing calculus on them. Sometimes this helps (like spherical coordinates for scenarios that have spherical symmetry). I wonder what calculus would look like using the coordinate system Joe presented, especially integrating over spaces. 13:26:36 From John Waters : The term "anarchy" is frequently (almost universally) attenuated in a most disingenuous way. The term should be used with great caution if not clear in context. From Jeremy Gross : Sorry, I need to drop 13:32:13 13:33:11 From Czeslaw Mesjasz : As I have said. One of most challenging directions of modern science is to study how human brain is operating. Studying how spatial ordering is perceived/created by humans is definitely one of the areas of that research. Thanks for inspiration. 13:33:13 From Allenna Leonard : We have talked about a Syntegration among people playing roles of stakeholders in a system but I would also like to see one where a participant would represent, to the extent possible for a human, the perspective of a tree or a river or a fish. 13:34:38 From Ian Kendrick : Reacted to "We have talked about..." with 💗 13:36:09 From Trevor Hilder : I have to go. but thanks! 13:40:24 From Martha Giraldo MINGAnet : As Maturana said living beings are born with the niche so to build processes connected and influencing the environment, people involved with this main issues should be invited to participate of the process ... (my reflection) 13:42:09 From Czeslaw Mesjasz : Mathematical spatial intuitions standing behind all these concepts are superb. Congratulations! 13:46:01 From John Waters : That's potentiall a DAO-realizable application. I've made notes about that possibility already. 13:47:53 From Martha Giraldo MINGAnet : Living beings an environment are not separated . Amazing work Joseph, thank you! Interesting relation with chakras... Yes, to continue reflection. From Allenna Leonard : We still have Barbara's 13:47:57

question. From Barbara : Not a question, just a comment. Thanks 13:48:20 Allenna. From Czeslaw Mesjasz : Sorry, I must leave. I have 13:49:36 other duties. From Catherine Hobbs : Thank you for an inspiring and 13:52:04 thought-provoking presentation and discussion! From Jeremy Gross : Great talk, Joe. Very thought-13:52:06 provoking. 13:52:41 From Martha Giraldo MINGAnet : Thank you Angela , bye!