3DVC Community Statement – 5th Floor

REVISED STATEMENT:

To deploy an open framework to enable comprehensive modeling of multi-scale structure and associated biological processes that will predict whole cell functions from genotype.

From genotype?

Test the outcome – reduces focus beyond the grand opportunity

Open vs public?

iPlant

DOE systems biology knowledgebase

iterative

GROUP:

David Goodsell

Tim Clark

Andrew McCulloch

Peter Dorrestein

Natarajan Kannan

Marcel Oberlender

Emily Bass (scribe)

GENERAL NOTES:

What is the common ground – what are shared needs?

- Infrastructure
- Community toolbox
    - Quantitative visualization of data
    - Tools for transferring data into a standardized format

- Database of information (David)

Phil's statement seems intended not to focus on tools, but to focus on problems that need to be addressed. (Andrew)

Focusing on "one grand challenge" leaves too many people out in the cold, as they won't be interested in the project. Naming a particular cell won't be sufficiently helpful because it excludes too many researchers and topics.

Need to identify specific paradigms that answered specific biological questions; some paradigms would use common tools, but others would use completely different tools. (Peter)

Delete "to describe" text from Phil's statement – unnecessary.

What about defining the specific communities that would use the 3DVC? (Natarajan)

3DVC could help provide "interdisciplinary bridges." (David)

Finding a common language between communities is key, irrespective of the language the researchers speak. (Peter)

Integrate data into a common framework. (Marcel)

Identify parameters on one scale and then translate across scales to bridge gaps (Marcel); includes data integration across scales.

An all-out "unifying methodology" is not needed, but standards for data extraction and delivery are needed.