---------- Delin Davis
1. How spanner ensures long lived Paxos Leaders?

2. How exactly is TrueTime API used to ensure externally consistent transactions?

---------- Prudhvi Ratna Badri Satya
1) What are the consequences that arise if an universe master fails?

2) Spanner has a feature that provides externally consistent reads and writes. Please Explain in detail.

---------- Madhavi Dontham

---------- Shan Wei
Q1: The author said: Movedir is not implemented as a single transaction, so as to avoid blocking ongoing reads and writes on a bulky data move. Instead, movedir registers the fact that it is starting to move data and moves the data amount of the data, it uses a transaction to atomically move that nominal amount and update the metadata for the two Paxos group.

Movedir is not implemented as a single transaction. Does it mean it will produce another one or more copy at the same time, so that reads and writes will not effect movedir to move data? If so, each time there happens a write will produce a number of data. Is it rational?

Q2: Most of application will probably replicate their data across 3 to 5 datacenters in one geographic region, but with relatively independent failure modes. Spanner replicate their data within or even across continents to improve its high availability. Will these replications highly increase the burden of data change? Once a replication is updated, all the others will also updated.

---------- Dale S. Flamm
Question 1:
What is meant by a semi-relational database?

Question 2:
Does the hierarchic(or Interleaving) ordering of rows in directories, in the data storage model, violate the path independence requirement of a relational model?

---------- Sai Kiran Reka
1. In 2.3, it says that spanner is semi relational database. Is the data normalized in spanner.

2. As the data is distributed across different countries, how does truetime eliminate the discrepancies caused due to difference in time zones.

3. what happens if a write is performed when replication of schema change is in progress?

---------- RVA Chaitanya
1) What is the semi-relational data model used in Megastore and a discussion on its performance?

2) What are Paxos and how will it effect the transactions? To be more specific how are the two related?
Chris Johnson
1) What is external consistency? What makes a transaction externally consistent? How is it defined in Spanner? How is it implemented in Spanner? Why is it important?

2) What is a directory (a bucket) in Spanner? What is its function and how does it work?

Nivali Madabhushnam
1) What is External Consistency? How does Spanner provide External Consistency?

2) What is Commit Wait?

3) Under what circumstances is a given replica both a participant leader and a coordinator leader?

4) How would you guarantee that timestamp monotonically increases across leaders without TrueTime?

Vikas Reddy Sudini
1. Are there any disadvantages with Google's spanner over Bigtable.

2. In the paper they said that they are using semi-relational data model. How is semi-relational data model is different from regular relational data model. What are the advantages?