Tutorial Facilitation Secret Plan – Subsystem Integration

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A layout of the tutorial facilitation is present below. The presentation has been divided into 7 sections. For each section of the tutorial facilitation, a basic description is provided as well as the approximate time duration and its presenter.

Introduction

Presented by: Ruixin Han
Time Duration: Approximately 2 minutes

The introduction of the tutorial facilitation will:

- Introduce team members, and topic of Subsystem integration - FBD's.
- Break audience into groups (make sure different to group assignment groups). Encourage that group members exchange names and introduce themselves to each other.

Explanation of Theory

Presented by: Justin Hongchoumpon
Time Duration: Approximately 12 minutes

In explaining the theory behind FBD's, a worked FBD example on lamps will be used. This will be explained with the aid of power point. Whilst explaining the theory, the following points will be emphasised:

- Purpose of FBD's
- Importance of understanding components/connections in complex systems.
- Distinguishing between internal, external, and outside subsystems.
- The interaction connections drawn on the FBD describe the way the system functions. – Inaccurate connections may provide false information about the system.

Introduce new system

Presented by: Michael Didimiotis
Time Duration: Approximately 2 minutes

This section will introduce a new system topic for the class – the Bus. In the introduction of the new system, it will be ensured that:

- Each student in the class has a basic understanding of the bus. If not, a basic explanation will be provided.
- The bus system refers to the bus itself, rather than the whole public transport system.

Create System Boundary Chart

Presented by: Michael Didimiotis
Time Duration: Approximately 15 minutes

Each group will be provided with an A3 sheet of paper and will be asked to create a system boundary chart, breaking down the subsystems of the bus system into Interior, Exterior, and Outside. During this, each team member will go around to each group and provide guidance if necessary. After each group has created their system boundary chart, as a class, a compiled system boundary chart will be created on the white board. This section will ensure that:

- Each class member has an understanding of Interior, Exterior, and Outside subsystems concept.

Create FBD and identify sub-subsystems

Presented by: Yijie Wang
Time Duration: Approximately 15 minutes

Referencing the system boundary chart that has just been created, each group will be asked to create an FBD for bus system, and identify any sub-subsystems. After each group has completed this task, a compiled FBD will be created on the whiteboard. This section will:

- Ensure each class member understands and create an FBD.
- Can identify the difference between subsystems and sub-subsystems.

Connections on the FBD

Presented by: Ruixin Han
Time Duration: Approximately 12 minutes

On the FBD that has been drawn on the white board, each group will be asked to draw the interaction connections between subsystems/sub-subsystems. After each group has completed this task, as a class, ideas will be discussed and the interaction connections drawn onto the FBD on the white board. This section will:

- Ensure each class member understands the importance of accurately defining interaction and connections within the system.

Conclusion

Presented by: Michael Didimiotis
Time Duration: Approximately 2 minutes

In concluding the presentation:

- The audience will be thanked for their attention and participation during the tutorial facilitation.
- There will be a basic recap identifying the steps to creating an FBD.

- A summary sheet with a completed FBD of the bus system will be handed to each of the students in the class.

TOTAL TIME: 60 minutes