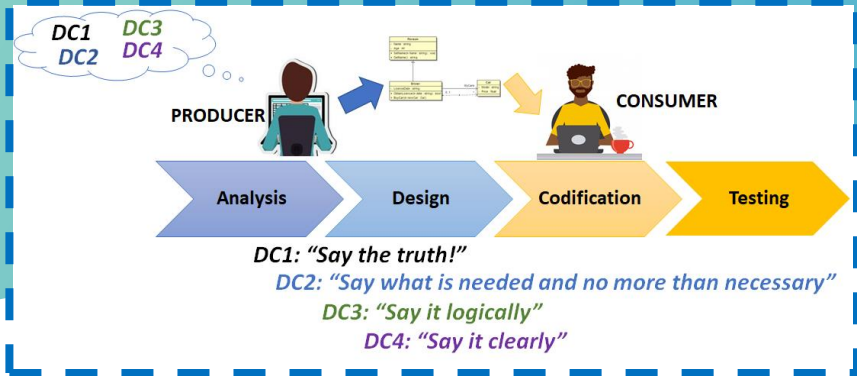


1. Federal University of Amazonas (Manaus/Brazil)
2. SEFAZ-AM (Manaus/Brazil)
3. PUC-Rio (Rio de Janeiro/Brazil)

adriana@icomp.ufam.edu.br, edson.cesar@sefaz.am.gov.br, tayana@icomp.ufam.edu.br, clarisse@inf.puc-rio.br

Communication failures mediated by software models may generate inconsistencies in software behavior, generating rework to correct them later

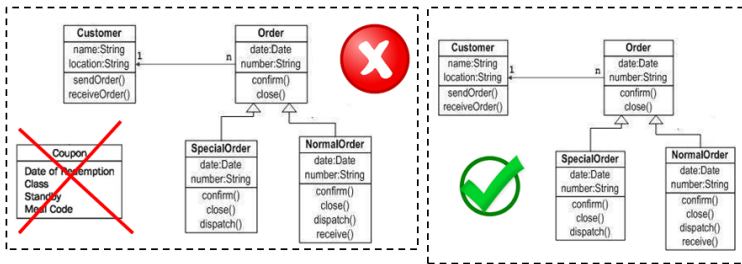
- A model can provide less information than necessary, or be expressed using ambiguous representations. Both problems may impair the model consumer's understanding



Using the Directives of Communicability - e.g. for Class Diagrams

DC1 "Say the truth!" - Use true information. Do not use information that affects the quality of the model

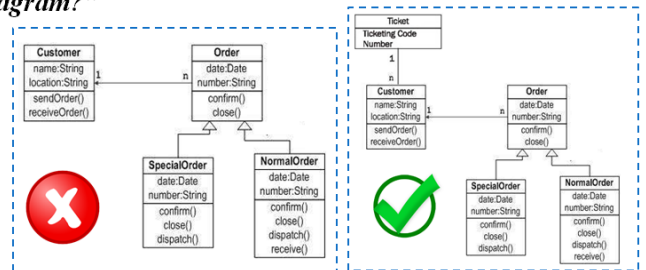
"Are there classes that are not part of the problem domain?"



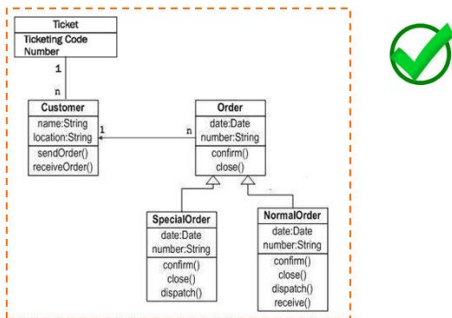
DC2 "Say what is needed and no more than necessary"

-Use the necessary content in the template. Do not use unnecessary content in the model

"Are all necessary classes of the problem domain in the diagram?"

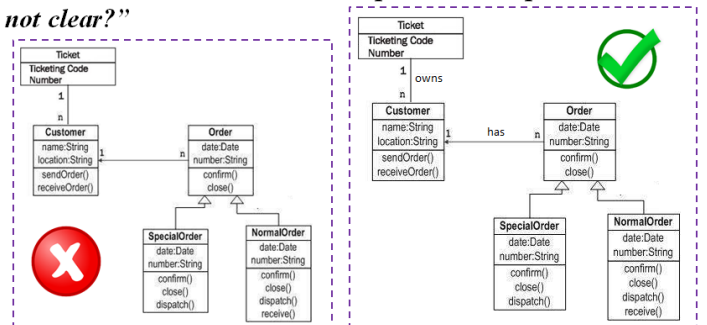


DC3 "Say it logically" - Organize the information in the model consistently



DC4 "Say it clearly" - Organize the information in the model clearly

"Are there classes and relationships with descriptions that are not clear?"



What are the risks of failures communication through software models?

DC1 "Say the truth!"

DEFECTS RELATED TO INFORMATION THAT IS OUT OF THE PROBLEM DOMAIN

- Classes that are not part of the problem domain
- Attributes that are not part of the problem domain

DC2 "Say what is needed and no more than necessary"

DEFECTS RELATED TO THE LACK OF NECESSARY INFORMATION OF THE PROBLEM DOMAIN

- Lack of domain classes
- Lack of relationships between classes

DC3 "Say it logically"

DEFECTS RELATED TO ORGANIZATION OF THE INFORMATION IN THE DIAGRAM

- Classes no relevant to system modeling
- Relationships no relevant to system modeling

DC4 "Say it clearly"

DEFECTS RELATED TO INFORMATION THAT IS NOT CLEAR IN THE DIAGRAM

- Classes with ambiguous descriptions
- Relationships without description can difficult the communication between model producers and consumers