SYSEN 6150: Model Based Systems Engineering

Context Diagrams & Errors

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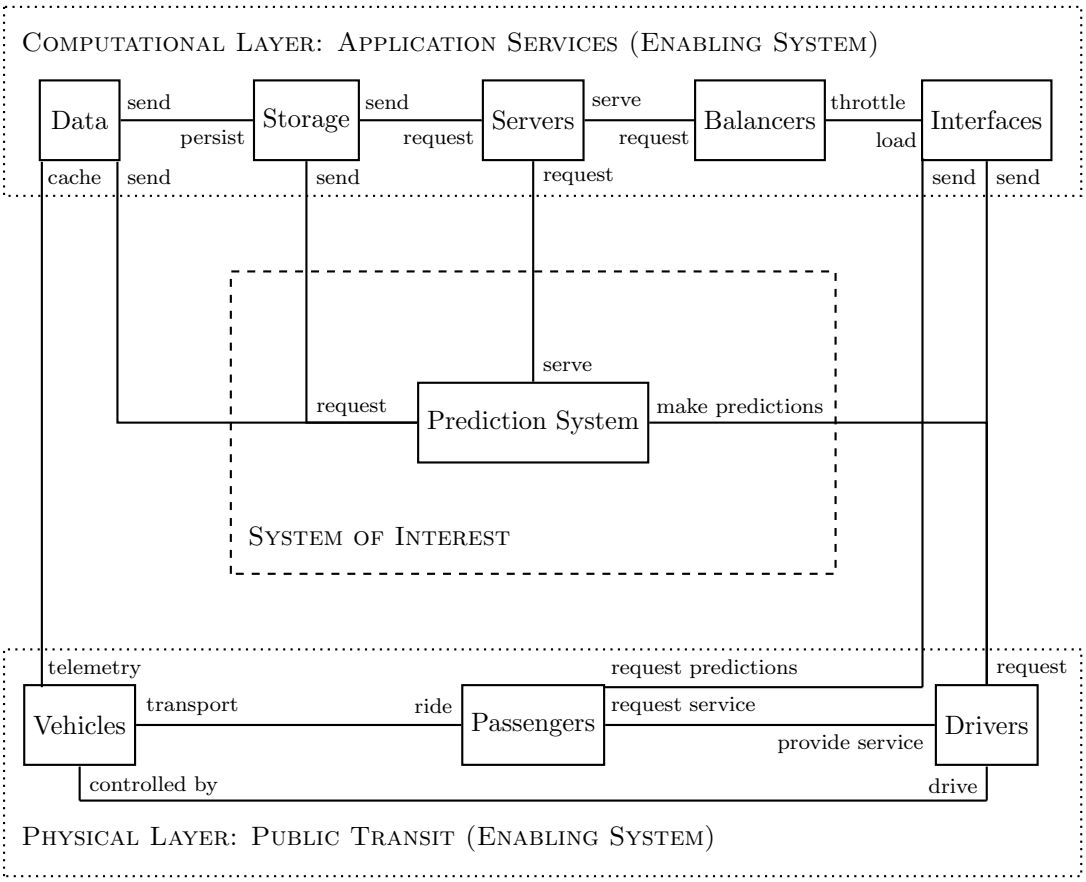
Context Diagram: Public Transit Prediction System



Context Diagram: Bad Practice

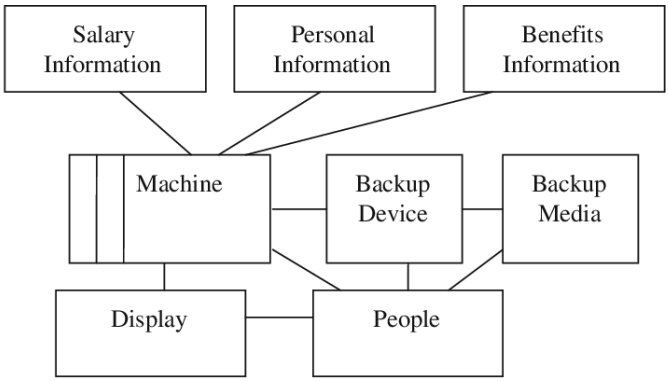


Figure 1: Example Context Diagram from *"Using Trust Assumptions with Security Requirements"* by Haley, et. al.(1)

There are several ways in which the context diagram exhibited above could improve. Below are 3 techniques that could be utilized to help bring clarity to the diagram:

1. Include a system boundary. In the example above, no system boundary was illustrated. A dashed box around the System of Interest (SOI) would bring focus to both the SOI, as well as the contextual components.

2. Include line labels. Brief descriptors or verbs to denote the relationships between components, as well as statements within the system boundary to indicate how the contextual components relate to the SOI.

3. Maintain a consistent component format. There is one example here where the *"Machine"* component contains additional lines intersecting the component box. Even if this could be substantiated, it is prudent to keep all of them the same appearance.

References

[1] C. Haley, R. Laney, J. Moffett, and B. Nuseibeh, "Using Trust Assumptions with Security Requirements," *Requirements Engineering*, vol. 11(2), 04 2006.