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Ready, Fire, Aim
How Timely Interface Analysis Reduces Risk in Software Projects

By [Mary Gorman](#)

Summary: Analyzing a project’s interface requirements often starts late and focuses-- sometimes exclusively--on creating a snazzy user interface. But failing to conduct interface analysis in a timely fashion increases the risk of project delays, overruns, and even failure. In this column, Mary Gorman makes the case for investing in interface analysis by explaining what it is and how it reduces the risk in software projects. She also describes best-practice models that help teams identify and validate crucial elements in all types of interfaces that may exist in software applications.

In my work I see software teams take unneeded risks when it comes to building interfaces. Do you recognize any of these?

- Spending tons of time on the look and feel of a user interface at the expense of other requirements
- Ignoring or deferring system-to-system interface requirements until the design phase or later
- Confusing which system “owns” the interfaces, creating delays in critical, cross-project planning
- Segregating interface requirements from analysis models

You can imagine the results. You end up with redundant, conflicting, or missing requirements, and therefore heightened risks, delays, overruns, and even project failure.

Many of these problems stem from a single cause: failing to analyze your product’s interfaces before you design them. So, what’s the difference between analysis and design?

Interface *analysis* explores, identifies, models, and specifies the user and software requirements needed to support connections between your product and external components. It is the “what” of interfaces. In contrast, interface *design* focuses on the “how.” For most of us, figuring out the “how” is what we like to do. It’s like a technical puzzle, and solving technical puzzles is what we’re good at. But it’s a mistake to dive into problem solving before you conduct a rigorous analysis of which problem you need to solve. More formally, before you worry about design, you need to validate that the interfaces you have in mind satisfy the business goals.

Which Is Which?

The key is to differentiate analysis results from design results. These may vary by project, methodology, and availability of resources. Here are a few examples:

Type of Interface	Interface Analysis	Interface Design
User interface	Navigation, storyboards	Detailed layout, style guide, widgets
Report	General layout, data	Rules for grouping, breaking, style guide
System to system	List of data	Detailed transmission layout
Hardware device	Purpose of device	Message specifications, timing

Good interface analysis boils down to a few best practices. Let’s take a look at those practices.

Plan Ahead

The first step in interface analysis is to understand the system’s boundaries, and a best practice is to build a model. For example, a context diagram shows interfaces as arrows between the system and the external components (people, other systems, hardware). With this knowledge, a project manager and an analyst can begin discussions with the representatives or owners of the components. The goal is to reach an agreement on which interface elements should get priority and how to budget and schedule the work.

About the Author

Mary Gorman, CBAP and senior associate at EBG Consulting, helps project teams explore, analyze, and build robust business and system requirements models. In September she presented “Integrating Interface Analysis into Your Project: Just-enough, Just-in-time” at SD Best Practices, Boston, and in November at ProjectWorld & the World Congress for Business Analysts, Anaheim. Mary serves on the Body of Knowledge (IIBA BOK) committee of the International Institute of Business Analysis and is the leader of the Requirements Elicitation subcommittee. She can be reached at mary@ebgconsulting.com and www.ebgconsulting.com.