Sometimes the architect also acts as a mediator between builder and client. There is often some disagreement about which decisions are in the realm of the architect and which are left to others, but it is always clear that the architect makes the major decisions, including all that can affect the usability, safety, and maintainability of the structure.

MUSIC COMPOSITION AND SOFTWARE ARCHITECTURE

Whereas building architecture is often used as an analogy for software architecture, music composition may be a better analogy. A building architect creates a static description (blueprints and other drawings) of a relatively static structure (the architecture must account for movement of people and services within the building as well as the load-bearing structure). In music composition and software design, the composer (software architect) creates a static description of a piece of music (architecture description and code) that is later performed (executed) many times. In both music and software the design can account for many components interacting to produce the desired result, and the result varies depending on the performers, the environment in which it is performed, and the interpretation imposed by the performers.

The Role of the Software Architect

Software development projects need people who play the same role for software construction that traditional architects play when buildings are constructed or renovated. For software systems, however, it has never been clear exactly which decisions are the purview of the architect and which can be left to the implementers. The definition of what an architect does in a software project is more difficult than the analogous definition for building architects because of three factors: lack of tradition, the intangible nature of the product, and the complexity of the system. (See Grinter [1999] for a portrayal of how a software architect carries out her role within a large software development organization.)

In particular:

- Building architects can look back at thousands of years of history to see what architects have done in the past; they can visit and study buildings that have been standing for hundreds, and sometimes a thousand years or more, and that are still in use. In software we have only a few decades of history and our designs are often not public. Furthermore, building architects have and use standards for describing the drawings and specifications that the architects produce, allowing present architects to take advantage of the recorded history of architecture.
- Buildings are physical products; there is a clear distinction between the plans produced by the architects and the building produced by the workers.