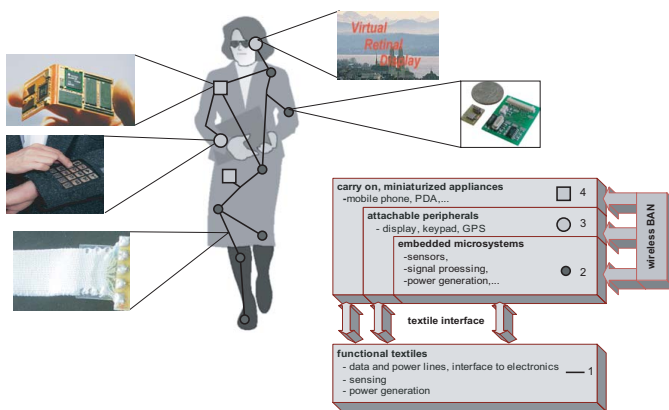# Bodynet Architectures: The Meaning of Wearability

[Invited Paper]

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Figure 1: The propsed Multi Layer Wearable System Architecture.

tionality, their relation to a particular part of the outfit, and implementation technology. It views the user's outfit as a complex, hierarchical system that combines different 'device' classes with a wide ranges of application domains and functionalities. For each device class the user has well defined ideas about their expected life cycle, price ranges and the way he needs to treat it. The architectural concepts are illustrated through examples of specific systems and applications.

Wearable systems are often vaguely described as electronics somehow integrated with clothing. We argue that while this is the way many systems are implemented, the definition of a wearable system is much more broad. Wearable systems are better defined through their functionality as systems that are usable always and everywhere. It is only from such functional definition that viable architectures and concepts for the integration of electronics with the users outfit can be developed.

Starting from this thesis we describe a multilayer wearable architecture concept that addresses on of the key questions of on body electronics: "What sort of integration between clothing and electronics makes sense for which application ?". The architecture is based on a system partitioning that makes sure that different components are embedded in the user's outfit to a different degree, adequate to their func-