



Motivation

Alexander Felfernig^{*}, Lothar Hotz[†], Claire Bagley[‡], and Juha Tiihonen[§]

^{*}Graz University of Technology, Graz, Austria

[†]HITeC e.V., University of Hamburg, Hamburg, Germany

[‡]Oracle Corporation, Burlington, MA, USA

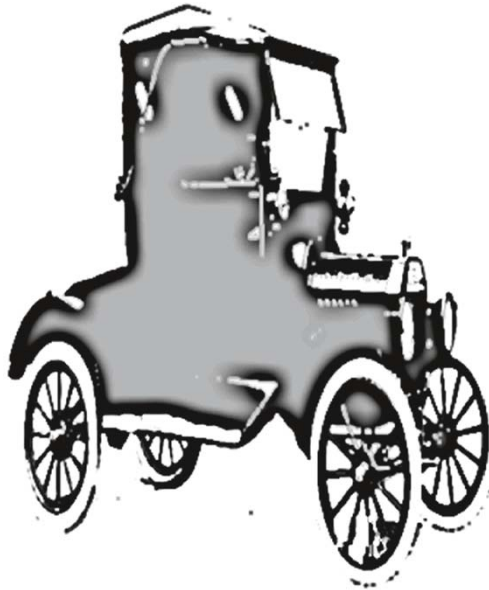
[§]Aalto University, Aalto, Finland



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Mass Production



Sketch of Ford T-Model.

Mass Production (MP): efficient production of a high number of identical products.

Henry Ford: *You can have any car color as long as it's black* (remark about T model in 1909).

☞ MP Business model of the past!

New Challenge: Buyer markets predominate!

Mass Customization (MC): customer-individual production of highly variant products under near mass production pricing conditions.



Mass Customization

Major goals:

- more intensively take into account customer requirements and preferences
- to achieve this goal under mass production level time and pricing conditions.
- ☞ Supportive technologies were needed to efficiently implement the new paradigm (MC).
- ☞ Configuration has evolved into a leading technology to support MC scenarios.

Knowledge-based Configuration

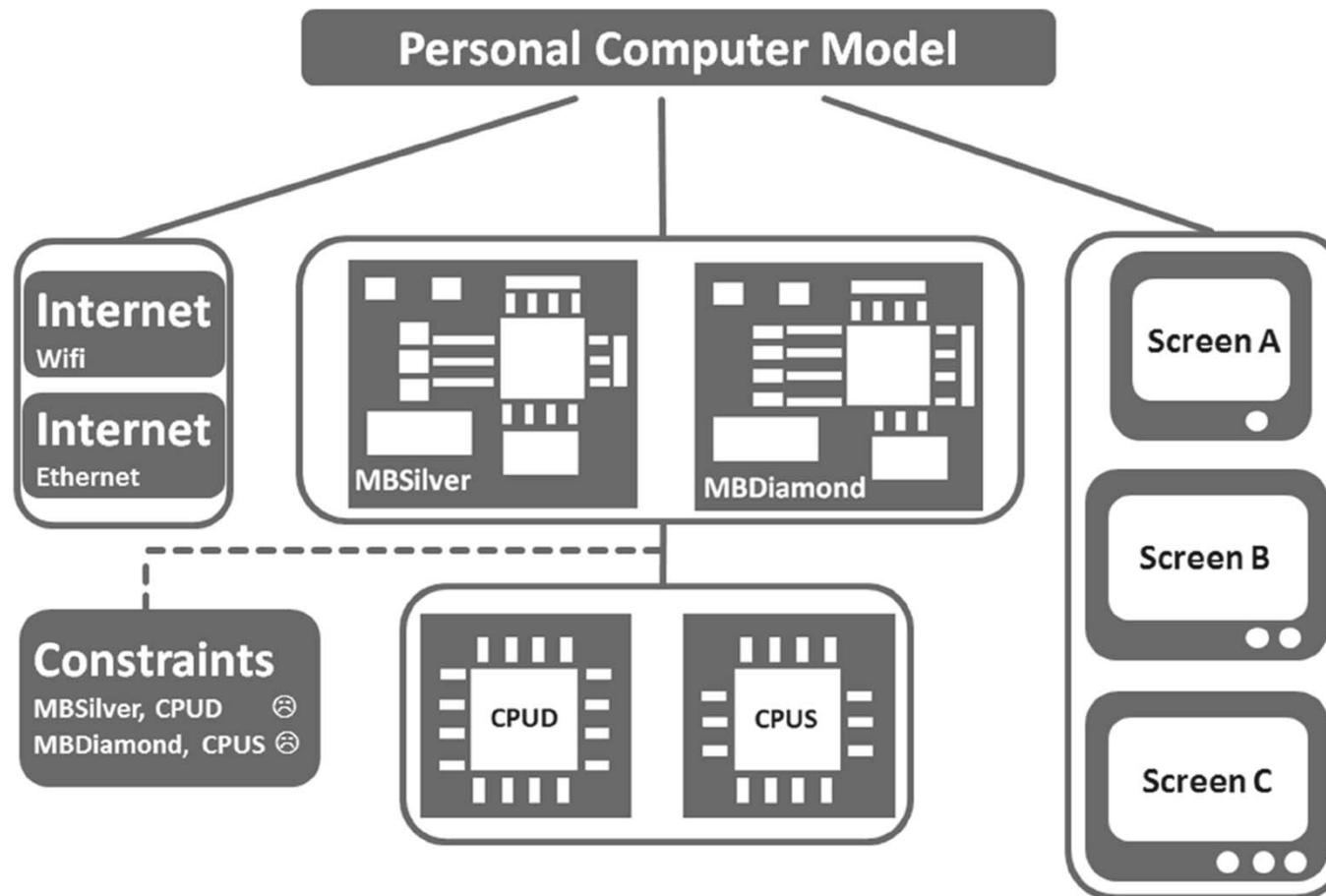
Definition: “a special case of design activity where the artifact being configured is assembled from instances of a fixed set of well defined component types which can be composed conforming to a set of constraints.” (Sabin and Weigel, 1998).

Component types and constraints constitute a configuration model (extremely high number of potential solutions, enumeration not practicable).

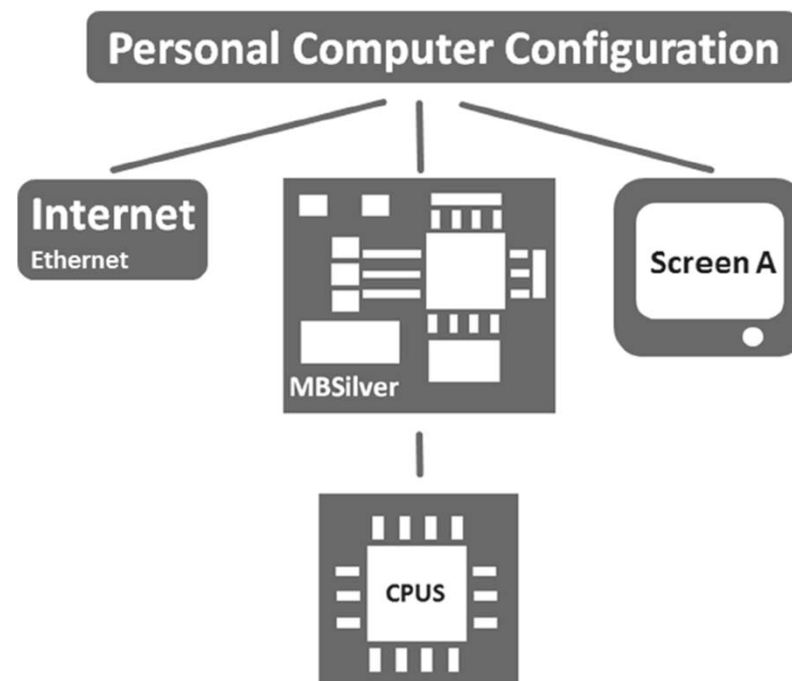
Configuration model and customer requirements constitute a configuration task (Mittal and Frayman, 1989).

Configuration task is given to a configuration system (configurator) – solution (configuration) is determined.

Example Configuration Model



Example Configuration





Overview of Configurator Applications

<http://www.configurator-database.com>



Persons in a Configurator Project (Stakeholders)

Knowledge Engineers: responsible for the development of a configurator application. Have deep knowledge about configuration technologies and cooperate closely with domain experts.

Domain Experts: major providers of technical (product engineers), marketing, and sales knowledge (experts from marketing and sales).

End Users: apply the configurator in the context of real-world business processes

Knowledge Acquisition: process of transforming product domain knowledge into the formal representation of a configuration knowledge base (configuration model).



Thank You!



References

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- (5) Sabin, D., Weigel, R., 1998. Product configuration frameworks – a survey. IEEE Intelligent Systems 13 (4), 42–49.