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# Architectures in context: on the evolution of business, application software, and ICT platform architectures

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## Abstract

This paper distinguishes between the business domain, the application software domain, and the Information and Communication Technology (ICT) platform domain. It analyses historical developments in each of these three domains and shows that they experienced parallel development. The parallelism can be explained by mutual influence and alignment. Innovation in one domain may enable or drive developments in another. In order to be able to analyse alignment patterns, the notions of business architecture, application software architecture, and ICT platform architecture are introduced and defined. Interdependent historical developments sometimes demonstrate a radical change. Each can be described as a shift in “dominant design”, and we identify six such changes in the history of the modern enterprise. Professionals and scientific researchers working in Information and Management can benefit from these insights by assuming that radical

changes in dominant designs will affect their field in the future according to the same pattern.



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## Keywords

Business architecture; Application architecture; ICT platform architecture; Architecture description; Dominant design; Alignment

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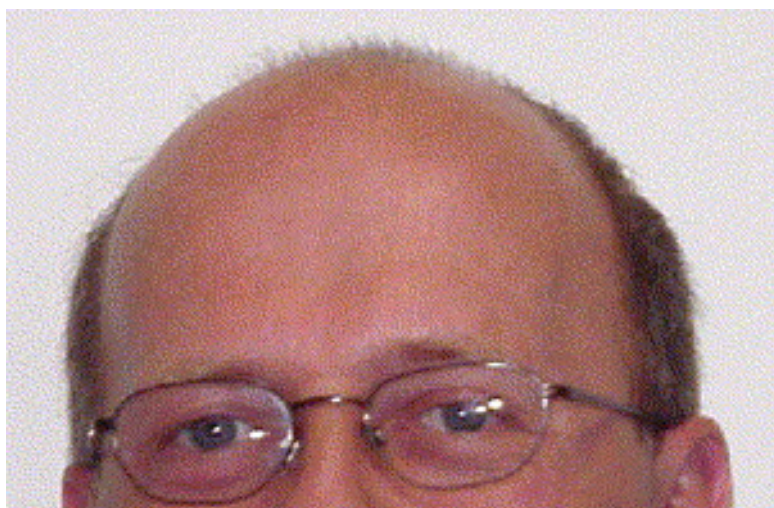
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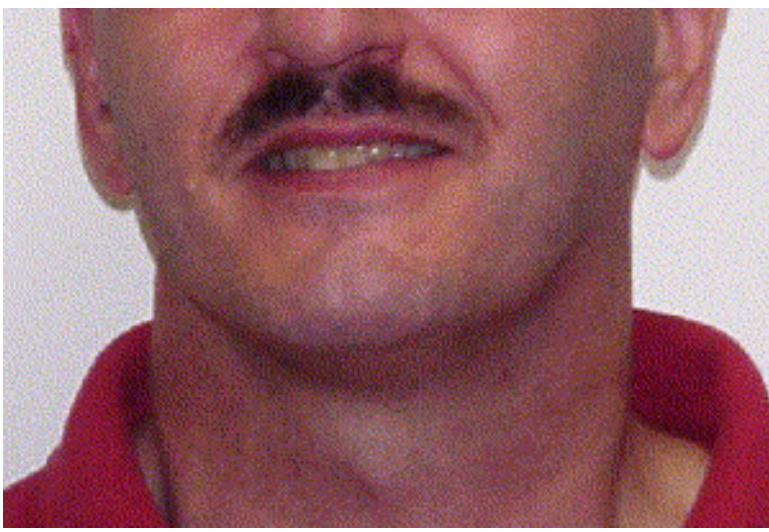
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**Prof. Dr. Dieter K. Hammer** is active in the area of systems/software architecting and scenario-based architecting for distributed real-time systems. Before his university appointment he worked for 10 years in industry as a system architect and project leader. He has written over 100 papers on various technical and software engineering subjects. As an IEEE senior member, he was involved in the organisation of many workshops and conferences.





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