

***ARCHITECTURAL INERTIA:  
THE EVOLUTION OF MODULAR SYSTEMS  
IN NETWORK MARKETS<sup>1</sup>***

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**ABSTRACT**

What causes the transformation of technological systems from modular structures and open architectures to integrated and proprietary ones? This paper takes a multi-level approach to develop a model of the evolution of modular technological systems that exhibit positive network externalities. Changes in technological architectures are driven by the behavior of powerful manufacturers of core subsystems that bundle and integrate complementary components and make the system less modular and open. Proprietary technologies and integrated structures reduce a system's flexibility and ability to adapt to environmental changes thus increasing *architectural inertia*. Propositions are formulated and the model is supported with an analysis of the personal computer industry.

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