

BUSINESS INTEGRATED MANUFACTURING MODEL

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Abstract: According to this new approach, a machining system interacts with the “market” carrying out a certain “service” (machining “service”) for a specified “client” (the work piece), with which establish a full economic relationship. We consider that the machining system has itself business model and business plan. The business model has as input the process characteristics, as output the “service” characteristics, while as parameters the system-market relationship characteristics. In this paper it is presented the generic business model for machining systems, where the cutting conditions are the process characteristic, the cost, the time, the profit rate and the environmental impact are the service characteristics, while the machining operation price is the model parameter. Also it is analysed the price - maximum profit rate relation. A particular business model for an experimental machining system is presented.

Key words: business integrated manufacturing, business model, machine -process system, adaptive optimal control.

