

PHENOMENOLOGICAL MODEL FOR GROWTH OF VOLUMES DIGITAL DATA

Andrey V. Makarenko, Ph. D.

R & D Group "Constructive Cybernetics", Russia

e-mail: avm@rdcn.ru

Abstract. Currently, experts from IT industry are closely monitoring the soaring total volume of digital data. Moreover the problem is not purely technical, it directly affects human civilization as a whole. The growth rate of the all increasing and is already very large. Began is actively appear apocalyptic scenarios of development IT technology, and humanity as a whole. In this paper we propose a constructive alternative to these emotional ideas. Invited to consider the digital industry as a complete system that is developing in close connection with human civilization. Moreover, system self-organizing and essentially nonlinear in its behavior. To study this system is applied system-cybernetic approach. The mathematical model is developed, shows that in the future rate of production of digital data is stabilize at 13.2 ZB per year.

Keywords: simulation, growth of volumes, digital data, forecast, singularity, systems approach.