

CONTENTS & ABSTRACTS

CYBER-RESOURCES ARCHITECTURE EVOLUTION IN A LARGE-SCALE SCIENTIFIC PROJECT	informational cause-effect relations between recent changes in innovation economy of some European countries and the ongoing quasi-innovative trends in Russian economy. A system model for information interaction status in the society is proposed, and the effect of
Large-scale corporate cyber-resources development and management in scientific research engender a set of technical and organizational problems, especially in data-intensive operations with heterogeneous sources. Some possible solutions are suggested based on the Knowledge Network technology. Grid-technology relevance and prospect are analyzed with reference to large-scale Knowledge Networks implementation in biomedical research.	this interaction's elements on national competitiveness is investigated. THE PROBLEMS OF UNIFIED QUALITY-BASED ENTERPRISE MANAGEMENT SYSTEM DEVELOPMENT
LIFECYCLE MANAGEMENT OF CORPORATE INFORMATION RESOURCES	The problem of international standards-based management systems interaction with traditional enterprise management practices is discussed. The paper shows possible ways to solve it by developing a model of the unified enterprise management system based on «activities' quality» concept.
lifecycle management of information resources. The approach supports dynamic integrity of data and metadata objects in the heterogeneous Internet environment. Applied software tools and implementation results of a content management system in a large diversified group of companies are presented.	MEDIUM-TERM DISCRETE DYNAMIC MODEL OF AN ENTERPRISE MANUFACTURING PRODUCTS WITH LIMITED SHELF LIFE UNDER STOCHASTIC DEMAND
FREQUENCY DOMAIN SIGNAL PROCESSING IN SPEECH RECOGNITION	Krasnov A. E., Umerenkov D. E.
Kolokolov A. S.	This paper describes the application of discrete dynamic «in- put-output» models based on recursive equations to enterprise's eco-
The paper discusses some methods of speech signals preprocessing in the frequency domain, which provide signal's description stable against frequency distortions and additive noises. The methods are based on logarithmic spectrum transformations implemented as band-pass filtering process of the spectrum envelope. The transformations allow for the lateral inhibition process and the responses of	nomic behavior modeling. The concepts of decreasing capital yield, dynamic demand, and enterprise management through product's selling price are pioneered for such models. The dependence of company stability and revenue on the market price volatility is investigated. A MODEL OF SMALL ENETERPRISE MANAGEMENT
on-off neurons in the auditory analyzer.	AS AN OPEN SYSTEM: THE METHODOLOGICAL ASPECT
LINEAR MODEL WITH UNCERTAIN EIGENVALUES 19 Leibov R. L.	Shpolyanskaya I. Yu.
The paper offers a linear model parameter estimation technique for a nonlinear model in time domain. A multivariable linear model with uncertain eigenvalues is considered. The paper shows that the uncertainty of eigenvalues diminishes the discrepancy between nonlinear and linear models. The technique was applied to parameter estimation of aircraft turbofan engine's linear model; the results are included.	The problems of developing a small enterprise's information system as an open system capable to respond adequately to all external environment changes are examined. Adaptation procedures with self-learning are offered as the models of active interaction between the system and the environment, while a simulation model is recommended for resource flows coordination in the system.
MODELS AND METHODS FOR ON-LINE SAFETY MANAGEMENT OF CHEMICAL PROCESSES. PART 2. PRODUCTION MODELS OF KNOWLEDGE REPRESENTATION IN DECISION-MAKING SUPPORT	ARTIFICIAL HEART DEVELOPMENT PROBLEM: THE CURRENT STATUS
SYSTEMS	The implementation and features of the Artificial Heart program
The paper suggests to use decision-making support systems in chemical process safety management tasks. Production rules and models for knowledge representation in such systems are developed.	are analyzed. The development results of implanted artificial heart's elements (ventricles, continuous flow pumps), diagnostic and resuscitation equipment are overviewed. The paper informs about the development of biodegradable matrices based on natural bacterial polymers intended as biocompatible frameworks for cells in bio-artificial tissues and organs. OPTIMAL ON-LINE BACKUP OF INFORMATION ARRAYS
THE NEURAL-NETWORK BASED SYNTHESIS OF DEVELOPING STRATEGIES FOR REGIONAL INDUSTRIAL PRODUCTION	
Schetinin V. G., Smolyakova M. K., Brazhnikov A. I.	AND SOFTWARE MODULES IN CORPORATE NETWORKS
The paper presents a technique to synthesize regional production	BASED ON INTERNET CHANNELS
development strategies under unrepresentative statistics of macroeconomic data. Fuzzy variables are offered for data presentation,	Paveliev S. V.
while Boolean neural networks, whose structure and parameters are determined from the learning sample, are applied to synthesize control actions under incomplete a priori information. The technique was successfully applied in 1995—2000 to synthesize short-term in-	WINTER CROPS PRODUCTION REPLANNING IN EMERGENCY SITUATIONS
dustrial production development strategies in Mordovia and Penza regions of the Russian Federation.	INTEGRATED INFORMATION REGISTRATION SYSTEMS
INFORMATION RESOURCE MANAGEMENT MODELING	FOR REMOTE ATTACKS REPULSION
AS A PART OF INDUSTRIAL POLICY37 Rakhmatullin I. F.	Shelkov M. A., Gladkov V. Yu.
Approaches to modelling the benefits of combined economic and	5 th INTERNATIONAL CONFERENCE «COGNITIVE
information resources management are outlined. The paper discusses	ANALYSIS AND SITUATION CONTROL» (CASC'2005)67

72 CONTROL SCIENCES № 3 · 2006