

GRAPHIC – ANALYTIC METHOD FOR RADARS INTERCEPTION AREAS COMPARISON

Zdeněk MATOUŠEK, Štefan ŠPIRKO

Abstract: The article describes graphic-analytic method evaluation of radar's possibility in recognition of different types of targets when the parameters of radar reconnaissance system are changing. The percentage differences of radar range (ΔR_d , ΔR_f , ΔR_o) are dependent to those parameters and are using for this method. In the article are also described the results of simulations of radar zone differences. The graphical-analytic method could be used also for indirect radar comparison.

Keywords: radar reconnaissance system, coverage area, range and altitude target recognition, probability of detection, probability of false alarm, radar cross section.

COMPARISON AND INTERPRETATION PAINTS SYSTEMS FOR DECREASING THERMOVISION INDICATIONS OF MILITARY TECHNIQUES

Peter DROPPA, Samuel FILÍPEK

Abstract: An enormous technological progress during the last decade causes the advancement in the military industry. With the increasing quality and sensitivity of the technology, which serve to the units in order to detect the enemy in the infrared electromagnetic spectrum, proportionally increases the standard of camouflaging of the mobile technology towards the thermovision reconnaissance. This paper was made to analyze contemporary state of camouflaging paint systems which are used or could be possibly used in the conditions of the Slovak Armed Forces.

Keywords: thermovision, thermovision indications, infrared camera, thermogram, camouflaging paint system, mask 1, thermal-tec, armour, thermal insulation, Infrared radiation.

PULSE RESPONSE MEASUREMENT AND PROCESSING BY SIX-PORT REFLECTOMETER

Norbert MAJER, Ján HARING, Peter POLOHA, Vladimír WIESER

Abstract: In this paper the pulse response estimation of radio channel by Six-port reflectometer (SPR) is described in real time, with baseband conversion, without RF mixers and without demodulation. Pulse response of radio channel, six-port reflectometer, radio channel and pulse response processing algorithms are simulated in program language Delphi 7.

Keywords: Pulse Response, Six-port Reflectometer, Multipath, Radio Channel.

GENESIS AND DEVELOPMENT OF INFORMATION SPHERE FOR AIR DEFENSE

Zdzisław MAŚLAK

Abstract: The developmental process of systems for gathering, processing and distributing the information based upon real events studied in this elaboration proved useful for constructing the sequence of conditionings for creation and development of the information sphere in the air defense. The beginning of development of new information area (on the sphere) for the air defense was a result of appearance of new device causing the threat from the air. Each of these devices caused the needs of improving them by both sides of the conflict. The increase in the scale of utility and variety for the military purposes and the permanent inflow of new information made the informative-to-decisive process more and more complicated. Finally, all information areas characteristic for multidimensional air defense as the whole was called the information sphere for the air defense.

Keywords: air defense, distributing information, development, aircraft, rockets.

A CHANGE OF THE PROTECTION PROPERTIES OF THE LIGHT DECONTAMINATION CLOTHES TRF-4 AFTER ITS MECHANICAL STRAINING

Stanislav FLORUS, Pavel OTRŽISAL

Abstract: During the practical usage of the protection clothes happens to their mechanical straining. Especially by the chemical corps specialists where can be time of usage of protection clothes very large, can happen in the result of mechanical straining, to its damage, to the loss of protection properties and in the eventuality, to the direct clothes user's exposure with the chemical substance or the other contaminant. The plenty of devices for body protection were constructed from light, chemical resistant materials of DuPont Company with the signification of Tychem in recent years. However these materials can have smaller mechanical resistance in the comparison with the classical materials. The influence of mechanical straining of impermeable encapsulating protective fabric of the light decontamination clothes TRF-4 was found by the experimental measurement in relation to its breakthrough time. The mechanical straining was undertaken with the abrasion examination with the help of abrasion machine, whose the basic parts is abrasion mechanism, electric motor and the counter of turns. The measurement with the help of mustard was undertaken after the mechanical straining. The result of the experimental measurement confirmed the dependence on the decline of the breakthrough time of the impermeable protective folio according to the number of abrasion turns. The decline of the breakthrough time is very steep. To the complete loss of protective properties of protection folio happens after the abrasion in the number of 2000 and 3000 turns.

Keywords: protection folio, light decontamination clothes TRF-4, mechanical straining, breakthrough time, DuPont, Tychem.

INTERPERSONAL COMPETENCE IN COMMANDING

Janusz ROPSKI

Abstract: Among variety of skills and abilities that a modern commander-in-chief should acquire so as to become efficient and successful in commanding his subordinates, the communication skills or interpersonal skills shall be the matter of crucial importance. Interpersonal competence of a modern commander-in-chief is tantamount to the consciousness of how important are his or her communication abilities. This involves both the theoretical and practical knowledge of how to become effective at communicating, which presuppose the knowledge of how to maximize the potential advantages of communication and how to minimize any possible disadvantages. If that knowledge is used in practice of communication with both the subordinates and the principals, it may in fact, become the determining factor for the efficiency of command.

Keywords: command, functions of command, unity of command, communication skills, interpersonal competence.

LIMITS OF BUSINESS DECISION MAKING IN PREDICAMENTAL AND UNCOMMON SITUATIONS

Stanislav MORONG

Abstract: The article disserts upon changes in method of armed conflicts, military and non-military threats. In special situations are performed restrictions, which influence businessman's decision making oriented on specific oddities of pricing.

Keywords: military and non-military threats, predicamental and uncommon situations, price decision making, legislative restrictions.

ADJUDICATE OPERATIONS IN GEOGRAFHC INFORMATION SYSTEM

Jozef ŠTULRAJTER, Libuša GASIDLOVÁ

Abstract: Geoinformation (spatial information) is very important in decision processes. Reliability of spatial information is crucial to make good and correct decisions in crisis management. Article describes and discusses several terms inconnection with reliability of spatial information.

Keywords: geographic information system, ArcView, decision support systems, spatial decision support systems, ecosystem management decision support.

PUBLIC SERVICE TRANSFORMATION AND DEFENCE DEMAND

Vladimír ŠEFČÍK, Tomáš SÁHA

Abstract: Public service act as a „relatively autonomous“ system regardless of real function of its activities verification in relation to actual citizen needs. Public service launch out activities where is no uniquely determined to what extent actual public needs (defence) and appropriate priorities are taken into account. It must pass through a reform. The reaction on present-day and future protective threats within the scope of public service transformation should be also an endeavour to reform and make more effective leverage in defence department. Fundamental is public service demand system corresponding the theory of public election and policy as a realization tool, and „transformational“ public interest system to public policy and in final implication to public services demand including defence.

Keywords: public sector, safety factor, defence, demand, public estate, crisis, public election.

TRAPS OF DECISION-MAKING IN CRISIS SITUATIONS

Ladislav ŠIMÁK, Vladimír MÍKA

Abstract: Crisis situations solution is connected with high demands of the decision making process. Typical sign is acute time shortness and missing important information. A decision-making is often comprehended as a single-shot fast process. But also in such situations it is necessary to accept the significance of individual steps of decision-making process. Some of them can be realized in well-timed advance. The article indicates on some problems and traps, which result from conditions of crises situations and from insufficient quality of the decision-making process.

Keywords: decision-making, problem analysis, steps of causal analysis, crisis situations, traps of decision-making process.

MULTINATIONAL LOGISTICS SUPPORT AND NATO PLANNING PROCESS

Zbyšek KORECKI, Zdeněk MÁLEK

Abstract: The aim of the article is to introduce the key NATO Force Planning process and explain new direction in logistics planning and realization phases. The article will explain the planning process from the derivation of NATO requirements, to the translation of those requirements into force goals and to the subsequent assessment of nations' fulfilments of these goals. Finally it will explain the assessment of the resultant risks to the Alliance and also provide a forum for the discussion of current force planning issues and challenges facing the Alliance.

Keywords: logistics support, planning process, deployable, manoeuvre, collaborative process.

IMPLEMENTATION OF MANAGERIAL METHODS IN THE SLOVAK ARMY

Soňa JIRÁSKOVÁ

Abstract: This paper describes some specific problems of implementation of useful managerial economics methods and tools in The Slovak Army. Special methods for effective decisions in public sector use cost analysis, such as: CMA - cost minimisation analysis, CBA – cost benefit analysis, CEA – cost effectiveness analysis, CUA – cost utility analysis. Nowadays managerial economics is often used for cost reducing and effectiveness increasing not only in business organizations but in public sector, too.

Keywords: managerial economics, cost minimisation analysis, cost benefit analysis, cost effectiveness analysis, cost utility analysis.

RADAR INTERCEPTION AREA MODELLING AND JAMMING INFLUENCE ON THE RADAR RANGE

Jozef TKÁČ, Štefan ŠPIRKO

Abstract: In the paper there are presented possibilities of radar range evaluation of the radar P-37M. The radar range was computed for separate height levels on a digital map of the Slovak Republic terrain. The MATLAB environment for its visualisation possibilities for the radar range modelling was used. There are presented effects of radar range reduction by jamming.

Keywords: radar, radar range, radar range reduction, jamming, digital map.