

ODSJEK ITS I LOGISTIKA

ZAVOD ZA TRANSPORTNU LOGISTIKU

Laboratorij za simulacije u logistici



Voditelj
Dr. sc. Tomislav Rožić
e-mail: tomislav.rozic@fpz.hr



DIVISION OF ITS AND LOGISTICS

DEPARTMENT OF TRANSPORT LOGISTICS



Laboratory for Simulations in Logistics



Head

Tomislav Rožić, Ph.D.

e-mail: tomislav.rozic@fpz.hr

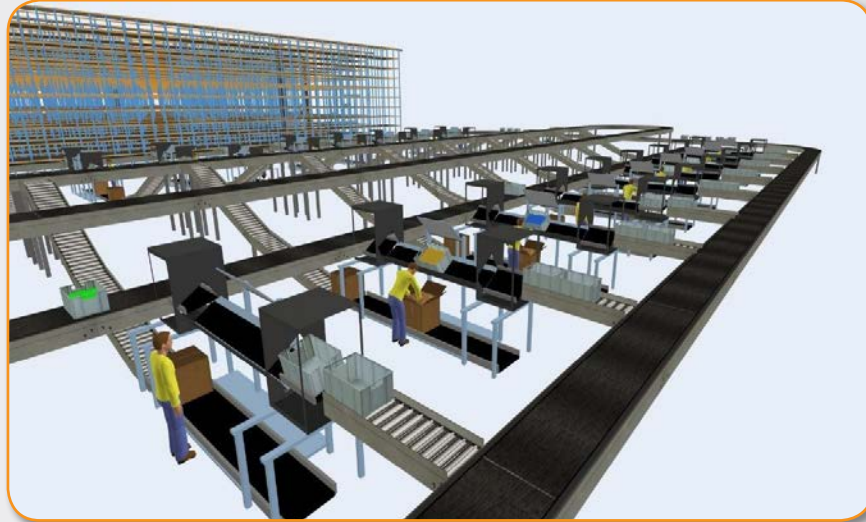


Naziv opreme / Equipment name

Program za simuliranje diskretnih događaja Flexsim
The software for simulation of discrete events Flexsim

Proizvođač / Manufacturer

FlexSim Software Products, Inc. (FSP), Orem, Utah, USA



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Namjena i opis / Purpose and description

Simulacijski programski alat Flexsim koristi se za simuliranje diskretnih događaja, odnosno za simulaciju skladišnih procesa, procesa na kontejnerskim terminalima, u zračnim lukama i proizvodnim pogonima. Simulacijski programski alat omogućuje razvoj trodimenzionalnih modela te omogućava visoku razinu preslika stvarnih sustava u simulacijski model.

Značajke simulacijskog programskog alata Flexsim:

- definiranje međuodnosa objekata
- izvođenje simulacijskih eksperimenata
- pregled statističkih podataka

Flexsim: simulation software tool is used for simulation of discrete events, simulation of the warehouse processes, processes in the container terminals, airports and manufacturing plants. Simulation toolkit allows development of three dimensional models and provide high level of importing real system in simulation model.

Flexsim simulation software tools features:

- define the interrelationship between objects
- execution of simulation experiments
- summary statistics





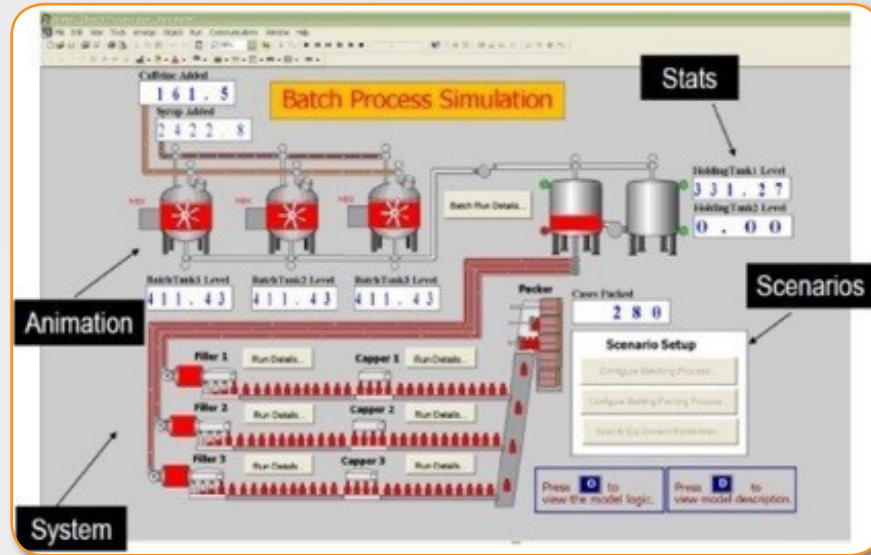


Naziv opreme / Equipment name

Program za simuliranje diskretnih događaja Arena
The software for simulation of discrete events Arena

Proizvođač / Manufacturer

Rockwell Automation, Inc., Wisconsin, USA



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Namjena i opis / Purpose and description

Simulacijski programski alat Arena koristi se za simulaciju diskretnih događaja, a dizajniran je za potrebe poslovnih konzultanata, analitičara, industrijskih i sistem inženjera.

Simulacijski programski alat Arena se primjenjuje podjednako i u akademskom i industrijskom sektoru. U području transporta i logistike, alat se primjenjuje najčešće za analize uskih grla u procesima, redova čekanja, razine zaliha i slično.

Značajke simulacijskog programskog alata Arena:

- modul za analizu statističkih distribucija kako bi dizajn procesnih varijabilnosti bio što točniji
- statistička analiza i generiranje različitih izvještaja
- mjerenje performansi
- realne 2D i 3D animacije u cilju vizualizacije sustava

The simulation software tool Arena is used to simulate discrete events and it is designed for the needs of business consultants, analysts, industrial and system engineers. Arena is applied equally in academic and in industrial sectors. In the field of transport and logistics, the tool is used most often for analysis of bottlenecks in processes, queuing and inventory levels.

Arena simulation software tools features:

- module for analyzing the statistical distribution so the design process variability would be accurate as possible
- statistical analysis and generating different reports
- performance measurement
- realistic 2D and 3D animations in order of visualization system





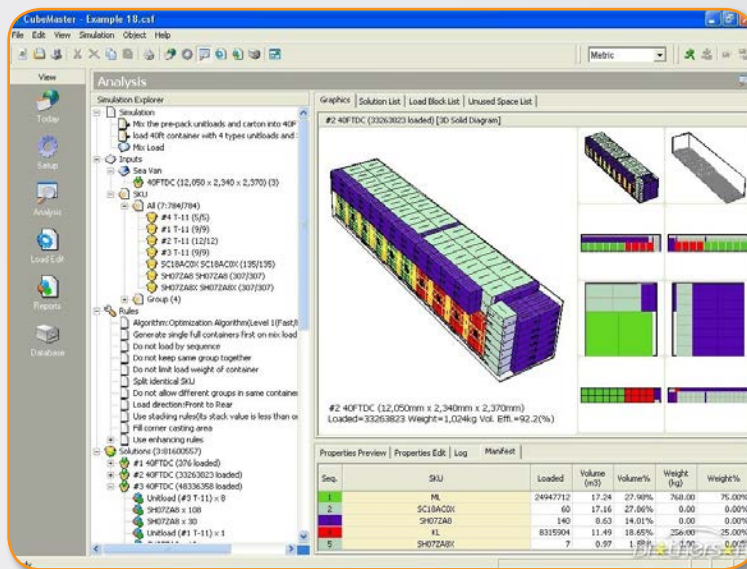


Naziv opreme / Equipment name

Program za simulaciju planiranja ukrcaja tereta Cargowiz
The software for planning of cargo loading Cargowiz

Proizvođač / Manufacturer

Softtruck Inc., Florida, USA



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Namjena i opis / Purpose and description

Cargowiz je programski alat za optimizaciju planiranja ukrcaja tereta u cestovna prijevozna sredstva i kontejnere.

Značajke programskog alata Cargowiz:

- definirane dimenzije cestovnih prijevoznih sredstava i kontejnera uz mogućnost prilagođavanja dimenzija
- označavanje tereta dijelom broja, skraćenom ID oznakom ili opisom
- 3D vizualni prikaz tereta
- mogućnost komunikacije s postojećim ERP, WMS ili drugim poslovnim sustavom u primjeni
- generiranje izvještaja pravila ukrcaja i ostali izvještaji
- proračun troškova i opterećenja na osovину prijevoznog sredstva

Cargowiz is a software tool to optimize planning of loading cargo in road vehicles and containers. Cargowiz software tool features:

- defining dimensions of vehicles and containers with possibility of adjusting the dimensions
- marking cargo with different color, ID label or description
- 3D visualization of cargo
- ability to communicate with existing ERP, WMS or other operating system
- generating reports of loading order and other reports
- calculating costs and load distribution in vehicle







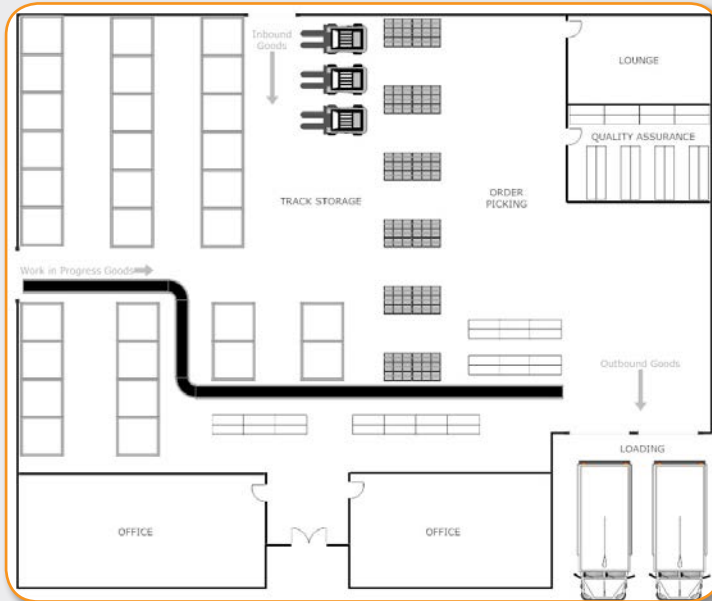
Naziv opreme / Equipment name

Program za izradu prikaza dijagrama tokova i hijerarhijskih struktura SmartDraw

The software for the development of flow diagrams and hierarchical structure SmartDraw

Proizvođač / Manufacturer

SmartDraw, LLC, USA



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Namjena i opis / Purpose and description

Smart Draw je programski alat koji pojednostavljuje izrade prikaza dijagrama tokova, hijerarhijskih struktura, a primarno na Zavodu za transportnu logistiku koristi se za izradu nacrtu skladišta.

Značajke programskog alata Smart Draw:

- izrada pojednostavljenih modela skladišta
- oblikovanja skladišnog prostora na temelju pripremljenih podloga
- odabir rješenja skladišne opreme i manipulacijskih sredstava

Smart Draw is a software tool that simplifies creation of the flow charts, hierarchical structures, but primarily at the Department of Transport Logistic is used for drafting of the warehouse.

Smart Draw software tool features:

- development of simplified warehouse models
- design of storage areas based on prepared drafts
- selection of solutions for warehouse equipment and manipulation equipment







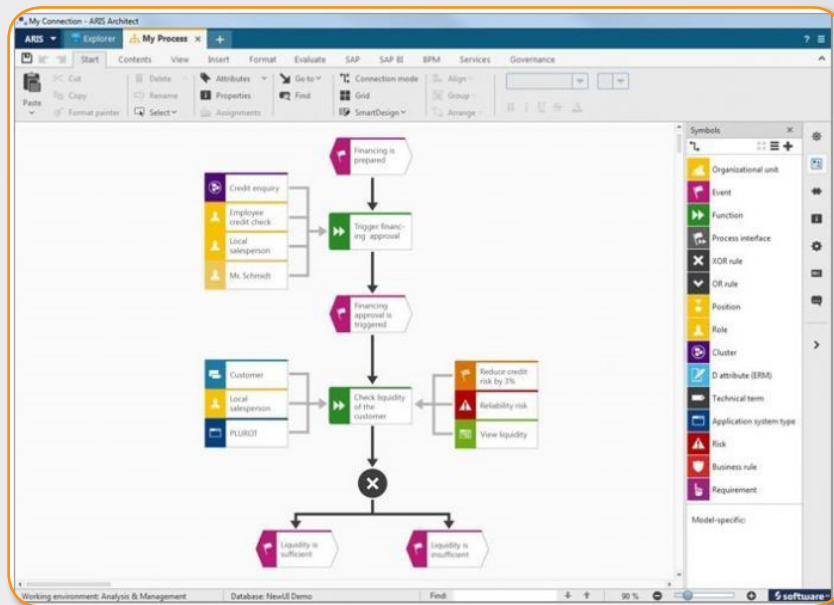
Naziv opreme / Equipment name

Program za izradu prikaza dijagrama tokova i hijerarhijskih struktura ARIS

The software for the development of flow diagrams and hierarchical structure ARIS

Proizvođač / Manufacturer

Software AG Germany and/or Software AG USA Inc



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Namjena i opis / Purpose and description

ARIS Enterprise pruža pogled na složene organizacijske strukture procesa i poslovne arhitekture. Dijagrami unutar repozitorija koriste se za praćenje, analizu i komunikaciju stanja na koji organizacija djeluje te kako djeluju povezani resursi. Iz ovog razloga ARIS definira dopuštene elemente i njihovo značenje. Nakon propisanog modeliranja dijagrami će donijeti učinkovito upravljanje poslovnim procesima. Arhitektura integriranih informacijskih sustava je okvir ne samo kao sredstvo modeliranja poslovnih procesa već kao koncept koji podržava i:

- dokumentiranje poslovnih procesa i struktura, integrirani način koji podržava dizajn, analizu, optimizaciju i implementaciju poslovnih procesa
- dokumentaciju Enterprise Architecture
- jednostavnu suradnju prilikom dizajniranja
- brza izgradnja rješenja bez visokih troškova u kratkom vremenu
- generiranje automatskih poslovnih procesa
- jedinstveno mjesto pohrane dokumenata za dosljednost podataka i njihovu kontrolu
- smanjenje vremena i troškova prilikom izrade dokumenata koristeći unaprijed pripremljene dokumente iz ARIS biblioteke, stvaranje novih nacrti poslovanja i/ili ustrojstva tvrtke, dodjeljivanje ovlaštenja i drugo



ARIS Enterprise Repository will provide an abstract view of the complex structures of the organizational processes and enterprise architectures. The diagrams within the repository are used to document, analyze, and communicate the state of how the organization operates and the associated consumed resources. For this reason, ARIS mapping conventions define the allowed elements and their meaning. Following prescribed modelling conventions will allow for efficient, collaborative business process and enterprise architect management across CSU's boundaries and disciplines.

The ARchitecture of Integrated Information Systems (ARIS) is a framework not only as a business process modelling tool but as a concept to support the:

- documentation of business processes in a structured, integrated manner that supports the design, analysis, optimization and implementation of business processes
- documentation of the Enterprise Architecture
- ease the collaboration on design of new CSU capabilities
- quickly build out solutions without costly and time - intensive development
- automation of business process document generation
- as a single point repository for business process document artefacts for consistency and document control
- reducing time and cost to create documents manually by generating pre-developed documents from ARIS content, generating new Business and/or Enterprise opportunity Blueprints, Role based authorization, etc.



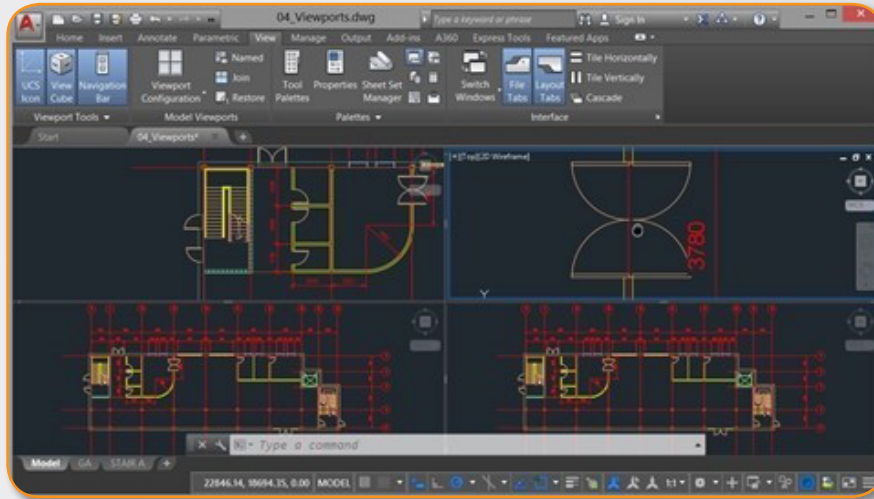


Naziv opreme / Equipment name

Program za crtanje nacрта AutoCAD2015
Software for technical drafting AutoCAD 2015

Proizvođač / Manufacturer

Autodesk Inc, USA



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Namjena i opis / Purpose and description

AutoCAD je računalni program za izradu nacрта a koristi se u arhitekturi, graditeljstvu i proizvodnji pri izradi nacрта i drugih inženjerskih planova. AutoCAD se koristi u raznim granama industrije, od strane arhitekata, projektnih menadžera, inženjera, grafičkih dizajnera i drugih stručnjaka. Program ima sve što je potrebno za izradu modela s opcijama daljnjih obilježavanja i označavanja. Široka ponuda Autodesk proizvoda obuhvaća razne platforme s programiranjem u realnom vremenu, Internet podršku i integraciju. Također postoje verzije programa za mobilne uređaje.

AutoCAD is a 2D and 3D computer-aided drafting software application used in architecture, construction, and manufacturing to assist in the preparation of blueprints and other engineering plans. AutoCAD is used across a wide range of industries, by architects, project managers, engineers, graphic designers and other professionals. AutoCAD has everything that you need to produce wire-frames and base models with further options of annotation and marking. Autodesk's CAD product range covers a lot of ground and had even brought it's platform to real time, web-based collaboration and integration. The mobile and handheld device versions of the applications are also out.



