UNIVERSITY OF TARTU
Institute of Computer Science
Software Engineering Curriculum

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A New Approach of Video Ingestion Processing for Entertainment Systems

Master's Thesis (30 ECTS)

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A New Approach of Video Ingestion Processing for Entertainment Systems

Abstract:

The process of secure and fast delivery of media content is a complicated and highly requested in the sphere of development of entertainment software. The main goal of this thesis is to create and integrate a software approach that is well developed, reusable, will satisfy customer's requirements, needs, solve customer's problem of secure media files preparation for further ingestion on board of the aircraft and to provide a description and overview of the full integration process of the created delivering media tool by author of this thesis. This thesis is based on the real case scenario and contains real-life customers with code implementation that will be reused in the future projects of the company.

The purpose of this paper is to provide information about resources that have been used to develop this approach, provide the software solution for the customer's request and compare the state of the software before and after implementation.

Another purpose is to compare the created product with already existing ones and show the advantages of such solution.

Keywords:

In-Flight entertainment, DRM protection, software solution, video encoding, media processing

CERCS:

P170 : Computer science, numerical analysis, systems, control

Uus lähenemisviis videofailide töötlemis- ja edastamisprotsessile meelelahutussüsteemides

Lühikokkuvõte:

Turvaline ja kiire meediasisu edastamine on keeruline, kuid ülimalt vajalik protsess meelelahutustarkvara arendamise vallas. Käesoleva magistritöö autori peamiseks eesmärgiks on luua ja integreerida tarkvaralahendus, mis on hästi arendatud, taaskasutatav ning vastab kliendi nõuetele, lahendades tema vajadust turvaliselt ette valmistada meedia failid nende järgnevaks edastamiseks lennuki pardale. Magistritöös kirjeldatakse kogu arendatud meedialahenduse integreerimise protsess.

Magistritöö põhineb päriselu stsenaariumil, mis oli ettevõttelt tellitud reaalse kliendi poolt. Arendatud lahendust on võimalik tulevikus kasutada ka teistes ettevõtte projektides.

Magistritöös antakse ülevaade antud lahenduse arendamiseks kasutatud vahenditest, luuakse kliendi tellimusele vastav tarkvaralahendus ning võrreldakse tarkvara seisundit enne ja pärast lahenduse implementeerimist.

Veel üheks töö eesmärgiks on võrrelda arendatud toode olemasolevatega ja demonstreerida selle lahenduse eeliseid.

Võtmesõnad:

Meelelahutus lennu ajal, DRM-kaitse, tarkvaralahendus, video kodeerimine, meediatöötlus

CERCS:

P170 Arvutiteadus, arvutusmeetodid, süsteemid, juhtimine (automaatjuhtimisteooria)

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