



Institutional Sign In

Institutional Sign In

All



ADVANCED SEARCH

Conferences > 2015 23rd Mediterranean Confe...

# A simulation model for a Cash Concentration and Disbursements System

Publisher: **IEEE**

[Cite This](#)

PDF

Carlos A. Herrera ; Asier Ibeas **All Authors**

**2**  
Cites in  
Papers

**81**  
Full  
Text Views



## Alerts

[Manage Content Alerts](#)  
[Add to Citation Alerts](#)

### Abstract

Authors

Figures

References

Citations

Keywords

Metrics

More Like This



Down  
PDF

#### Abstract:

This paper presents a simulation model for a Cash Concentration and Disbursements System (CCDS) seen as an inventory management system, based on difference equations and ... **View more**

#### Metadata

#### Abstract:

This paper presents a simulation model for a Cash Concentration and Disbursements System (CCDS) seen as an inventory management system, based on difference equations and systems engineering techniques. The model assumes the existence of delays due to banking procedures and analyzes the application of the zero balance accounts concept. The case of a generic company whose agencies are geographically distributed in different regions is proposed. The model assumes the existence of a centrally operated main account and minimum balance policy. This account receives money transfers from the revenues accounts of each agency and, also from the main account, money is transferred to the agencies' expense accounts in order to cover overdrafts. There exist an investment account into which any cash surpluses of the main account are deposited and a credit line in order to avoid the cash deficits. The operating rules for the CCDS are defined, and income and financial costs involved are considered. The model represents the flow of money between the identified elements of the system and the flow of money requirements or transfer orders. An equivalent model represented by algebraic equations through the Z-transform is derived, which opens perspectives for using rigorous control techniques in the field of finance.

**Published in:** 2015 23rd Mediterranean Conference on Control and Automation (MED)

---

 **Contents**

---

Sign in to Continue Reading

---

Authors	▼
Figures	▼
References	▼
Citations	▼
Keywords	▼
Metrics	▼

---

CHANGE  
USERNAME/PASSWORD

PAYMENT OPTIONS  
VIEW PURCHASED  
DOCUMENTS

COMMUNICATIONS  
PREFERENCES

PROFESSION AND  
EDUCATION

TECHNICAL INTERESTS

US & CANADA: +1 800  
678 4333

WORLDWIDE: +1 732  
981 0060

CONTACT & SUPPORT



[About IEEE Xplore](#) [Contact Us](#) [Help](#) [Accessibility](#) [Terms of Use](#) [Nondiscrimination Policy](#) [IEEE Ethics Reporting](#) [Sitemap](#) [IEEE Privacy Policy](#)

## IEEE Account

- » [Change Username/Password](#)
- » [Update Address](#)

## Purchase Details

- » [Payment Options](#)
- » [Order History](#)
- » [View Purchased Documents](#)

## Profile Information

- » [Communications Preferences](#)
- » [Profession and Education](#)
- » [Technical Interests](#)

## Need Help?

- » **US & Canada:** +1 800 678 4333
- » **Worldwide:** +1 732 981 0060
- » [Contact & Support](#)

[About IEEE Xplore](#) [Contact Us](#) [Help](#) [Accessibility](#) [Terms of Use](#) [Nondiscrimination Policy](#) [Sitemap](#) [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.  
© Copyright 2024 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.