CEN

WORKSHOP

AGREEMENT

CWA 16008-11

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English version

J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Part 11: Camera Device Class Interface - Programmer's Reference

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

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CWA 16008-11:2009 (E)

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Foreword

This CWA contains the specifications that define the J/eXtensions for Financial Services (J/XFS) for the Java ™ Platform, as developed by the J/XFS Forum and endorsed by the CEN J/XFS Workshop. J/XFS provides an API for Java applications which need to access financial devices. It is hardware independent and, by using 100% pure Java, also operating system independent.

The CEN J/XFS Workshop gathers suppliers (among others the J/XFS Forum members), service providers as well as banks and other financial service companies. A list of companies participating in this Workshop and in support of this CWA is available from the CEN Secretariat, and at http://www.cen.eu/cenorm/sectors/sectors/isss/activity/jxfs_membership.asp. The specification was agreed upon by the J/XFS Workshop Meeting of 2009-05-6/9 in Brussels, and the final version was sent to CEN for publication on 2009-06-12.

The specification is continuously reviewed and commented in the CEN J/XFS Workshop. The information published in this CWA is furnished for informational purposes only. CEN makes no warranty expressed or implied, with respect to this document. Updates of the specification will be available from the CEN J/XFS Workshop public web pages pending their integration in a new version of the CWA (see http://www.cen.eu/cenorm/sectors/sectors/isss/activity/jxfs_cwas.asp).

The J/XFS specifications are now further developed in the CEN J/XFS Workshop. CEN Workshops are open to all interested parties offering to contribute. Parties interested in participating and parties wanting to submit questions and comments for the J/XFS specifications, please contact the J/XFS Workshop Secretariat hosted in CEN (jxfs-helpdesk@cen.eu).

Questions and comments can also be submitted to the members of the J/XFS Forum through the J/XFS Forum web-site http://www.jxfs.net.

This CWA is composed of the following parts:
- Part 1: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Base Architecture - Programmer's Reference
- Part 2: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Pin Keypad Device Class Interface - Programmer's Reference
- Part 3: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Magnetic Stripe & Chip Card Device Class Interface - Programmer's Reference
- Part 4: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Text Input/Output Device Class Interface - Programmer's Reference
- Part 5: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Cash Dispenser, Recycler and ATM Device Class Interface - Programmer's Reference
- Part 6: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Printer Device Class Interface - Programmer's Reference
- Part 7: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Alarm Device Class Interface - Programmer's Reference
- Part 8: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Sensors and Indicators Unit Device Class Interface - Programmer's Reference
- Part 9: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Depository Device Class Interface - Programmer's Reference
- Part 10: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Check Reader/Scanner Device Class Interface - Programmer's Reference (deprecated in favour of Part 13)
- Part 11: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Camera Device Class Interface - Programmer's Reference
- Part 12: J/eXtensions for Financial Services (J/XFS) for the Java Platform - Release 2009 - Vendor Dependant Mode Specification - Programmer's Reference
- Part 13: J/eXtensions for Financial Services (J/XFS) for the Java Platform – Scanner Device Class Interface - Programmer's Reference (recommended replacement for Part 10)

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

History

Main differences with CWA 14923-11:2004 are:

- Support of PBM protocol oriented Camera Systems has been added in Appendix A.
- JXFS_S_CAM_MEDIA_CHANGED and JXFS_S_CAM_THRESHOLD_CHANGED have been deprecated.
- Open job handling clarified at base architecture level so specific chapter in this document is removed.
- Specific declaration of result codes used by each job has been removed, and now result refers to common section at the end of the document.
- mediaThreshold property of JxfsCameraCapabilities has been deprecated.
- JXFS_E_CAM_TAKEPICTURE and JXFS_E_CAM_RESET result codes have been deprecated.
- Constructor for JxfsCamera and JxfsCameraStorage classes have been added.
- JxfsCameraCapabilities mistakes have been fixed.

1   Scope

This document describes the Camera Device Class (CAM) based on the basic architecture of J/XFS which is similar to the JavaPOS architecture. It is event driven and asynchronous.

Three basic levels are defined in JavaPOS. For J/XFS this model is extended by a communication layer, which provides device communication that allows distribution of applications and devices within a network. So we have the following layers in J/XFS:

- Application
- Device Control and Manager
- Device Communication
- Device Service

Application developers program against control objects and the Device Manager which reside in the Device Control Layer. This is the usual interface between applications and J/XFS Devices. Device Control Objects access the Device Manager to find an associated Device Service. Device Service Objects provide the functionality to access the real device (i.e. like a device driver).
During application startup the Device Manager is responsible for locating the desired Device Service Object and attaching this to the requesting Device Control Object. Location and/or routing information for the Device Manager reside in a central repository.

To support Camera Devices, the basic Device Control structure is extended with various properties and methods specific to this device which are described on the following pages.

2   Overview

2.1   Description

This document describes the input and output features of the Camera System. It offers the functionality of a banking camera system. These camera systems usually consist of a recorder, a video mixer and one or more cameras. The diagram shows the basic structure of a camera system inside a J/XFS-environment (standard configuration).
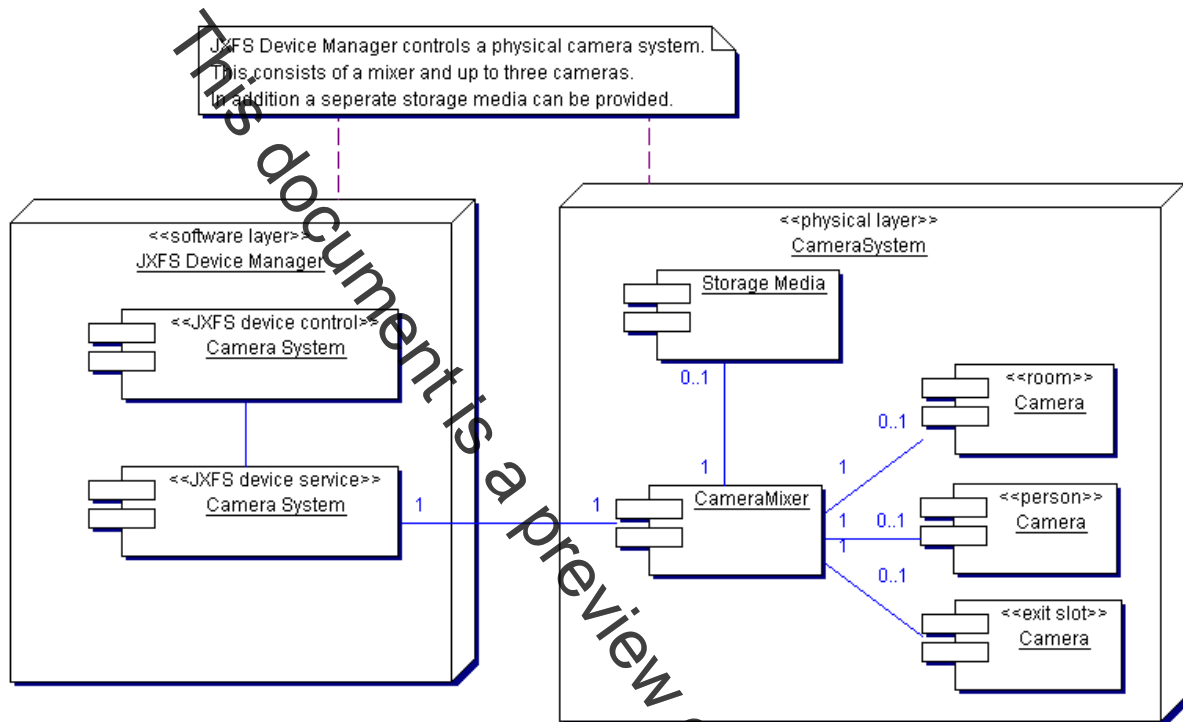
This configuration is the most common used in the field but can vary in different installations.
If there are several cameras, each camera has a focus on a special place within the self-service area. The standard configuration consists of three cameras with focus on the room, the customer or the cash tray. In addition to these standard focustypes the vendor of the camera-system can apply additional cameras with arbitrary focus.

By using the video mixer it can be decided which of the cameras should take the next photo. Furthermore data can be given to be inserted in the photo (e.g. date, time or bankcode). The picture is usually stored in a single storage media that is connected to the camera mixer.

Instead of having three (physical) cameras it is possible that only one single camera is present. In this case the camera may be able to take photos from different positions.