TU/e

Project FINGERPAINT

STD-1.0

Software Transfer Document

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Eindhoven - June 23, 2013

Abstract

This document is the Software Transfer Document (STD) of the FINGERPAINT application. The FINGERPAINT application is part of the Software Engineering Project (2IP35) of the Eindhoven University of Technology.

The STD is based on the ESA standard for software development, as set by the European Space Agency (ESA) [1]. It describes the procedures for transferring the FINGERPAINT application from Group Fingerpaint to the customer.

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Document Status Sheet

Document Status Overview

General

Document title:	Software Transfer Document
Identification:	STD-1.0
Author:	Tessa Belder, Roel van Happen, Benjamin van der Hoeven
Document status:	First draft

Document History

Version	Date	Author	Reason of change
0.0	19-Jun-2013	Tessa Belder, Roel van Happen, Benjamin van der Hoeven	Initial version.

Document Change Records Since Previous Issue

General

Date:	19-Jun-2013
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Changes

Page	Paragraph	Reason to change
-	-	Initial version.

Chapter 1

Introduction

This chapter contains general information regarding this document.

1.1 Purpose

This document contains information regarding the transfer of the FINGERPAINT application from Group Fingerpaint to the customer. It describes what is to be transferred, and how these items have been tested before the actual transfer. In chapter 6, the state of the transferred items is listed with regards to the user requirements of the URD [2].

1.2 Scope

The FINGERPAINT application is an application designed and developed by Group Fingerpaint for prof.dr.ir. P.D. Anderson, at the Eindhoven University of Technology. The application serves as an educational tool for anyone who wants to gain a deeper understanding of the process of mixing in general, and in particular for students at the TU/e.

1.3 List of definitions

1.3.1 Definitions

Customer: Prof.dr.ir. P.D. Anderson.

Java Development Kit: The software used to build Java applications.

Ant: Tool to build Java applications.

Make: A tool which controls the generation of executables and other non-source files of a program from the program's source files.

1.3.2 Abbreviations

2IP35	The Software Engineering Project
ADD	Architectural Design Document
ATP	Acceptance Test Plan
JDK	Java Development Kit
TU/e	Eindhoven University of Technology

1.4 List of references

[1] ESA, *ESA Software Engineering Standards*. ESA, March 1995.

[2] Group Fingerpaint, "User requirements document," *SEP*, 2013.

[3] Group Fingerpaint, "Acceptance test plan," *SEP*, 2013.

[4] Group Fingerpaint, "Software requirements document," *SEP*, 2013.

[5] Group Fingerpaint, "Architectural design document," *SEP*, 2013.

[6] Group Fingerpaint, "Detailed design document," *SEP*, 2013.

[7] Group Fingerpaint, "Unit test plan," *SEP*, 2013.

[8] Group Fingerpaint, "Integration test plan," *SEP*, 2013.

[9] Group Fingerpaint, "Software user manual," *SEP*, 2013.

[10] Group Fingerpaint, "Software transfer document," *SEP*, 2013.

[11] Group Fingerpaint, "Software configuration management plan," *SEP*, 2013.

[12] Group Fingerpaint, "Software project management plan," *SEP*, 2013.

[13] Group Fingerpaint, "Software quality assurance plan," *SEP*, 2013.

[14] Group Fingerpaint, "Software validation and verification plan," *SEP*, 2013.

1.5 Overview

The remainder of this document starts with a description of the build procedures in chapter 2. The installation procedures for the software built using these build procedures are described in chapter 3. The list of items transferred to the customer is described in chapter 4. A summary of the test results obtained by executing the tests in the ATP [3] is provided in chapter 5. Chapter 6 lists some items that were not implemented satisfactorily. If any modifications were requested by the customer during the transfer phase, they are listed in chapter 7. If these were implemented during the transfer phase, they are documented in chapter 8.

Chapter 2

Build procedure

The build procedure for the FINGERPAINT application can be found in sections **??**, **??** and **??** of the ATP [3].

Chapter 3

Installation procedure

The installation and deployment procedures for the FINGERPAINT application can be found in section ?? of the ATP [3].

Chapter 4

Configuration item list

This chapter gives an overview of the configuration items transferred to the customer. All documentation is delivered in TeX format as well as PDF format. The project-docs directory contains the latest version of all documents in TeX format. Earlier versions can be found in the archive and master library. These are stored on the FINGERPAINT server in PDF format.

4.1 Product items

Here we will give a list of all product items.

4.1.1 Requirement and design documents

- URD [2]
- SRD [4]
- ADD [5]
- DDD [6]

4.1.2 Test plans

- UTP [7]
- ITP [8]
- ATP [3]

4.1.3 Other documentation

- SUM [9]
- STD [10]

4.1.4 Software products

- FINGERPAINT server
- FINGERPAINT client

4.2 Process items

Here we will give a list of all process items.

4.2.1 Project plans

- SCMP [11]
- SPMP [12]
- SQAP [13]
- SVVP [14]

Chapter 5

Acceptance test report summary

During the acceptance test, all tests written in the ATP[3] succeeded. This means all the user requirements these tests are written for are met. This means requirements **CPR1, CPR2, CPR3, CPR6, CPR7, CPR8, CPR9, CPR10, CPR11, CPR12, CPR13, CPR17, CPR18, CPR19, CPR20, CPR21, CPR22, CPR23, CPR24, CPR25, CPR29, CPR30, CPR31, CPR32, CPR33, CPR34, CPR35, CPR36, CPR37 and CPR40** of the URD[2] are met. All other capability requirements are not implemented, and thus not met. Another conclusion that came from the acceptance tests is that the application does not work efficiently on mobile phones, regardless of operating system. Finally, the graph functionality does not work in Internet Explorer, and the exporting functionality does not work on Safari.

Chapter 6

Software Problem Reports

During the transfer phase, the following are all known bugs at the transfer phase:

6.1 Popups

Issue

When a popup pops up, other buttons still appear clickable while they are not.

Solution

When the popup pops up, there should be a darker overlay under the popup that covers the screen.

6.2 Compare performance

Issue

When the local storage is full, the graph for comparing performance of multiple mixing runs fails to load.

Solution

When the local storage is full, the graph should load normally.

6.3 Delete confirmation

Issue

When deleting files, no confirmation popup shows up before deleting.

Solution

When a file is to be deleted, a popup should show up to confirm the removal.

6.4   Full local storage

Issue

When saving something, no warning is given when the local storage is full.

Solution

If the local storage is full when saving, a warning should be given that the local storage is full.

6.5   Internet Explorer

Issue

In Internet Explorer, performance graphs fail to be drawn.

Solution

performance graphs should be drawn in Internet Explorer like usual.

6.6   Resizing

Issue

If the application is resized to a size smaller than the canvas, the browser chrashes.

Solution

The browser should not chrash when resizing.

6.7   Safari exporting

Issue

In Safari, images cannot be exported properly.

Solution

Exporting in Safari can be enabled by sending the to be downloaded file to the server, and downloading it from there.

Chapter 7

Software Change Requests

Storing an empty protocol

Storing an empty protocol is currently possible. The save button that saves a protocol should be disabled when the protocol is empty.

Show loading

When the application is busy loading a concentration distribution, the program should display that it is busy loading.

Stop define protocol inappropriate

The *stop define protocol* button in the protocol menu should be called *back*, to be consistent with the other *back* buttons.

Popups should be centered

Popups should be centered, even when the window is resized.

Performance graphs should have a logarithmic scale

The performance graphs should have a logarithmic scale on the y-axis.

The gray entries are confused with selected entries

In the *view multiple performance* option, the gray entries in the loading menu are confused with selected entries. They should be more distinguishable.

Buttons are sometimes unresponsive

Sometimes button presses do not register, this could be alleviated by making the buttons bigger.

Responsive cellLists

While the buttons are now fast, the cellLists used for loading are still slow. They should be sped up.

Messages should be out of the way

Messages for *save/remove successful* should be in the corner of the screen, where they do not block buttons.

Differently coloured back button

The back buttons should be coloured differently, to make them stand out.

Remove the CellBrowser

With only a single geometry, the CellBrowser is rather useless, therefore it should be removed.

Initial tutorial distribution

When the application is started, it is unclear how the walls function. For this purpose, a 'tutorial distribution' should be made. This tutorial distribution should explain how the walls can be used for mixing.

Chapter 8

Software Modification Reports

A list of software modification reports completed during the transfer phase.

Storing an empty protocol

The *save protocol* button has been disabled when the current protocol is empty.

Show loading

The application now shows a loading animation when it is loading.

Stop define protocol inappropriate

The *stop define protocol* button has been renamed to *back*.

Performance graphs should have a logarithmic scale

The performance graphs now have a logarithmic scale on the y-axis.

The gray entries are confused with selected entries

In the *view multiple performance* option, the gray entries in the loading menu are now coloured lighter.

Remove the CellBrowser

The CellBrowser is disabled.