

TERRAIN SERVER 13

SERVICE PACK 1

RELEASE NOTES

SIMULATION

PRESAGIS

Contents

- Chapter 1: Terrain Server 13 Service Pack 1 5**
 - Fixes6
 - Known issues6

- Chapter 2: Terrain Server 13 7**
 - What’s new8
 - All platforms8
 - Linux platform8
 - Fixes9
 - API and samples changes9
 - Configuration files changes11
 - Known issues11

- Chapter 3: Acronyms 12**

- Chapter 4: Acknowledgements..... 15**

- Copyright 16**

Terrain Server Release Notes

Welcome to the Release Notes for Terrain Server 13 Service Pack 1.

Terrain Server 13 Service Pack 1

This section describes the fixes made to the software since the previous release, as well as any known issues and limitations of the current version.

This section includes:

- [Fixes](#)
- [Known issues](#)

Fixes

This section describes the limitations discovered in previous releases that have been fixed.

- ST-5319: Added missing material code mappings for Presagis CDB databases.

Known issues

This section describes any known issues and limitations of the current version, as well as any pending issues from previous versions.

- OpenFlight Conversion

The OpenFlight converter does not always generate a list of triangles in the same order. This means that with two back-to-back triangles from different conversions, a hit can be on either triangle with a resulting normal vector being in either of the opposite directions.

- OpenFlight Data Files (terrain and dynamic structures)

The OpenFlight reader is not currently available on Linux. This means that an OpenFlight terrain and dynamic structures must be converted to the internal representation (*.tsg) on a Windows platform and copied over.

- OpenFlight Limitation

On Windows, two Terrain Server applications cannot run simultaneously on the same computer when loading an OpenFlight terrain or dynamic structures. To work around this, the OpenFlight files must be converted to the internal representation (*.tsg).

- OpenGL functionality

The server components requires the presence of the OpenGL functionality on a computer. On Linux, the server component may fail to execute (crash) when the OpenGL functionality is not available.

Terrain Server 13

This section describes the new features and enhancements in this release of Terrain Server, as well as the fixes made to the software since the previous release.

This section includes:

- [What's new](#)
- [Fixes](#)
- [API and samples changes](#)
- [Configuration files changes](#)
- [Known issues](#)

What's new

This section provides an overview of the major new features and enhancements introduced in this release of Terrain Server.

All platforms

- Handling of the CDB databases has been revised:
 - Migration to CdbApi 2.0 for accessing the CDB data.
 - Replaced **ini** files with **XML** files, and revised their content (see [Configuration files changes](#)).
 - Allowed use of the bathymetry data when the altimetry data is missing (uses an elevation of 0.0 meter).
 - Added option to only use bathymetry data when the material code is “water” (new default).
- Offset parameters were added to some of the services (see [API and samples changes](#)).
- Added methods to simplify handling of “status” values (see [API and samples changes](#)).
- When using a CDB database, the `tsp::IDatabaseManager::loadDatabase` argument is the path to the CDB root folder instead of the configuration file.
- Increased the maximum number of subscriptions per services.

Linux platform

- Migration to gcc 4.4 (64-bit platform only).
- Automatic shell creation when using the `tsp_cmd_*.csh` scripts (no longer “source” them).

Fixes

This section describes the limitations discovered in previous releases that have been fixed.

- Various issues with internal threading of processing.
- Communication issue when using TCP/IP between the client and the server.
- Notification issue when adding a dynamic structure not causing recalculation.
- Floor calculation issue with HOT service location based subscriptions when inside a building.
- Call back missing issue when setting the call back function and the data is already present.
- Fixed handling of dataset parameter in HOT query functions.

API and samples changes

- Replaced Windows operating system calls with portable functions.
- Moved compiler provided services to the `tsp_CompilerServices.h` include file.
- Moved console handling services to the `tsp_ConsoleServices.h` include file.
- Improved some descriptions.
- Updated the samples to apply the API changes.
- Replaced `DatasetSelectionEnum` enumeration with `DatasetSelectionFlags` constants.
- `tsp::IDatabaseInfo` interface:
 - Extended the `DatabaseStateEnum` enumeration with new error values.
 - Added the `isLoadingCompleted` and `hasLoadingFailed` static methods with a state parameter.
 - Added the `isLoadingCompleted` and `hasLoadingFailed` methods with no parameter.

- **tsp::IDatabaseManager** interface:
 - The value of the **iFileSpec** parameter in the **loadDatabase** function has changed for CDB databases.
- **tsp::IDynamicStructureResult** interface:
 - Removed the **StatusEnum::eStatusPartLoaded** enumerator.
 - Added the **isProcessingCompleted** and **hasProcessingFailed** static methods with a state parameter.
 - Added the **isProcessingCompleted** and **hasProcessingFailed** methods with no parameter.
- **tsp::IHeightOfTerrain** and **tsp::IHeightOfTerrainResult** interfaces.
 - Added the **iVerticalOffset** parameter to the **query** function.
- **tsp::IHeightOfTerrainGeoResult** interface:
 - Merged interface into **tsp::IHeightOfTerrainResult** interface.
- **tsp::ILineOfSightExt** interface:
 - Added the **setBodyOffset1** and **getBodyOffset1** methods.
 - Added the **setBodyOffset2** and **getBodyOffset2** methods.
- **tsp::IMaterialTransition** interface:
 - Added the **setBodyOffset** and **getBodyOffset** methods.
- **tsp::ISteepestPoint** interface:
 - Added the **setBodyOffset** and **getBodyOffset** methods.

Configuration files changes

- The configuration of the CDB processes has been changed and replaced with XML files.
- The *CDB processes parameters* section in the *User Guide* has been replaced with four sections:
 - *CDB database parameters*
 - *CDB runtime publisher parameters*
 - *CDB runtime publisher activation line*
 - *CDB data server parameters*

Known issues

This section describes any known issues and limitations of the current version, as well as any pending issues from previous versions.

- **OpenFlight Conversion**

The OpenFlight converter does not always generate a list of triangles in the same order. This means that with two back-to-back triangles from different conversions, a hit can be on either triangle with a resulting normal vector being in either of the opposite directions.
- **OpenFlight Data Files (terrain and dynamic structures)**

The OpenFlight reader is not currently available on Linux. This means that an OpenFlight terrain and dynamic structures must be converted to the internal representation (***.tsg**) on a Windows platform and copied over.
- **OpenFlight Limitation**

On Windows, two Terrain Server applications cannot run simultaneously on the same computer when loading an OpenFlight terrain or dynamic structures. To work around this, the OpenFlight files must be converted to the internal representation (***.tsg**).
- **OpenGL functionality**

The server components requires the presence of the OpenGL functionality on a computer. On Linux, the server component may fail to execute (crash) when the OpenGL functionality is not available.

Acronyms

Acronym	Description
ACE	Adaptive Communication Environment
API	Application Programming Interface
CDB	Common Database
DAG	Directed Acyclic Graph
DLL	Dynamic Link Library
DOM	Document Object Model
DS	Dynamic Structure
GUI	Graphical User Interface
GUID	Globally Unique Identifier
HOT	Height Of Terrain
ID	Identification
IDE	Integrated Development Environment

Acronym	Description
IP	Internet Protocol
LOS	Line Of Sight
LOSE	Line Of Sight Extended
MT	Material Transition
NED	North-East-Down
OS	Operating System
PDF	Portable Document Format
P2P	Point-to-Point
RAM	Random Access Memory
RDGE	Runtime Database Generation Engine
ROM	Read-Only Memory
RTP	RunTime Publisher
RTTI	Runtime Type Information
SDK	Software Development Kit
SMC	Surface Material Code
SO	Shared Object
SP	Steepest Point
TCP	Transmission Control Protocol
TS	Terrain Server
TSP	Terrain Services Provider
TTL	Time to Live
UDP	User Datagram Protocol
UM	Utilities Manager

Acronym	Description
URI	Universal Resource Indicator
USB	Universal Serial Bus
VRAM	Video Random Access Memory
W3C	Worldwide Web Consortium
WWDB	Worldwide Database
XML	Extensible Markup Language

Acknowledgements

- This product includes ACETM (Adaptive Communication Environment) version 6 (<http://www.cs.wustl.edu/~schmidt/ACE.html>).

Copyright © 1993-2009 Adaptive Communication Environment. All rights reserved. (<http://www.cs.wustl.edu/~schmidt/ACE-copying.html>)

- This product includes wxWidgets version 2.8.12 (<http://www.wxwidgets.org/>)

Copyright © 1992-2006 wxWidgets. All rights reserved. (http://docs.wxwidgets.org/stable/wx_copyrightnotice.html#copyrightnotice)

wxWidgets version 2.8.12, March 28, 2011

- This product includes Xerces-C++ version 3.1.1 (<http://xerces.apache.org/xerces-c/>).

Copyright © 1999-2010 The Apache Software Foundation. All rights reserved. (<http://www.apache.org/>)

Copyright

© 2013 Presagis™ Canada Inc. All rights reserved.

All trademarks contained herein are the property of their respective owners.

PRESAGIS PROVIDES THIS MATERIAL AS IS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Presagis may make improvements and changes to the product described in this document at any time without notice. Presagis assumes no responsibility for the use of the product or this document except as expressly set forth in the applicable Presagis agreement or agreements and subject to terms and conditions set forth therein and applicable Presagis policies and procedures. This document may contain technical inaccuracies or typographical errors. Periodic changes may be made to the information contained herein. If necessary, these changes will be incorporated in new editions of the document.

Presagis Canada Inc. and/or Presagis USA Inc. and/or its suppliers are the owners of all intellectual property rights in and to this document and any proprietary software that accompanies this documentation, including but not limited to, copyrights in and to this document and any derivative works therefrom. Use of this document is subject to the terms and conditions of the Presagis Software License Agreement included with this product.

No part of this publication may be stored in a data retrieval system, transmitted, distributed or reproduced, in whole or in part, in any way, including, but not limited to, photocopy, photograph, magnetic, or other record, without the prior written permission of Presagis Canada Inc. and/or Presagis USA Inc.

Use, distribution, duplication, or disclosure by the USA Government is subject to “Restricted Rights” as set forth in DFARS 252.227-7014(c)(1)(ii).

February 22, 2014