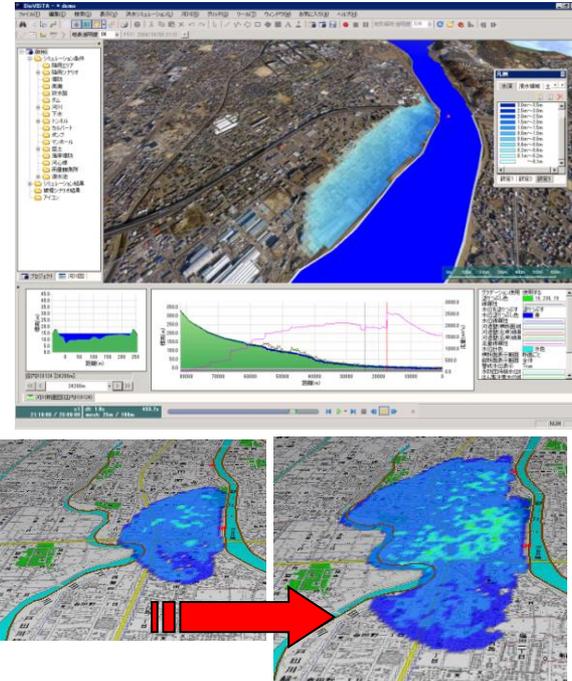
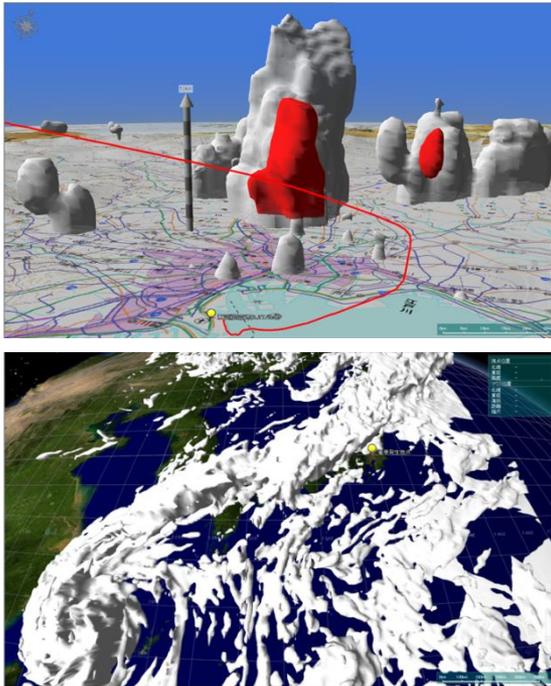

Flow of creating a flood area map using DioVISTA/FloodOur

 株式会社 日立パワーソリューションズ

Provide information technology to respond to the increased risk of heavy rain and flooding due to climate change

product	DioVISTA / Flood	DioVISTA / Storm
purpose	Flood analysis and prediction	Visualization of analysis and observation data
image		
Launch	June 2006 ~	August 2014 ~

Support for flood analysis work

- DioVISTA/Flood
- Compliant with the Immersion Drawing Manual (4th Edition)
- High-speed calculation with proprietary Dynamic DDM technology
 - Patented (Japan, USA, China)
 - Optimized for 64-bit CPUs
 - Approximately 48~68 times faster than conventional (compared to our company)
- Easy operation integrated with GIS
 - Please refer to the next page and later

Ingest river data

Right-click River.

河川の新規作成(N)
河川縦横断データのインポート(I)...

Select [Import River Cross-section data].

3. Regular longitudinal crossing
Select Data

フォルダーの選択

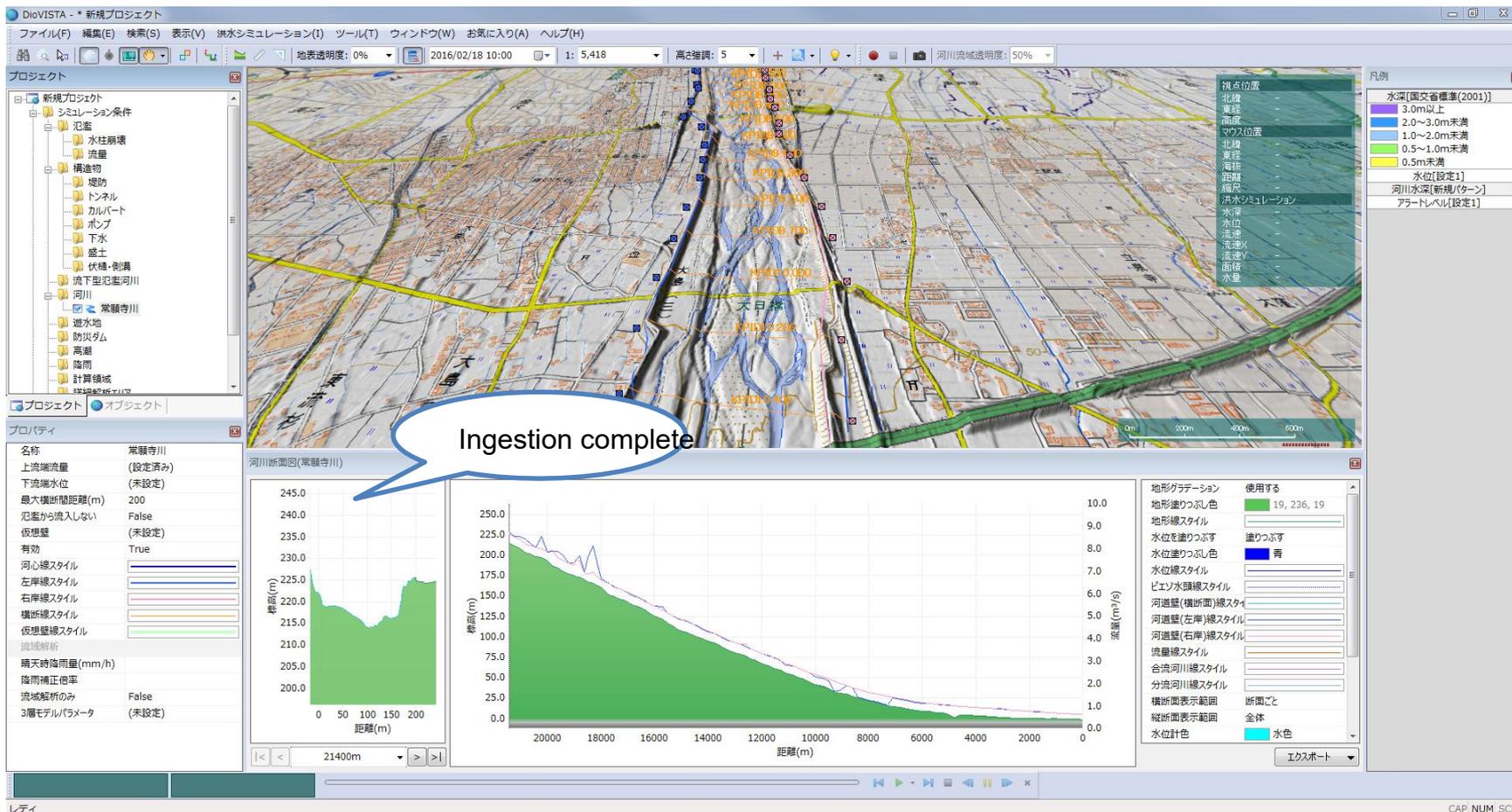
フォルダー: 常願寺川

フォルダーの選択 キャンセル

河川縦横断データをインポートします。

CAP_NUM SCRL

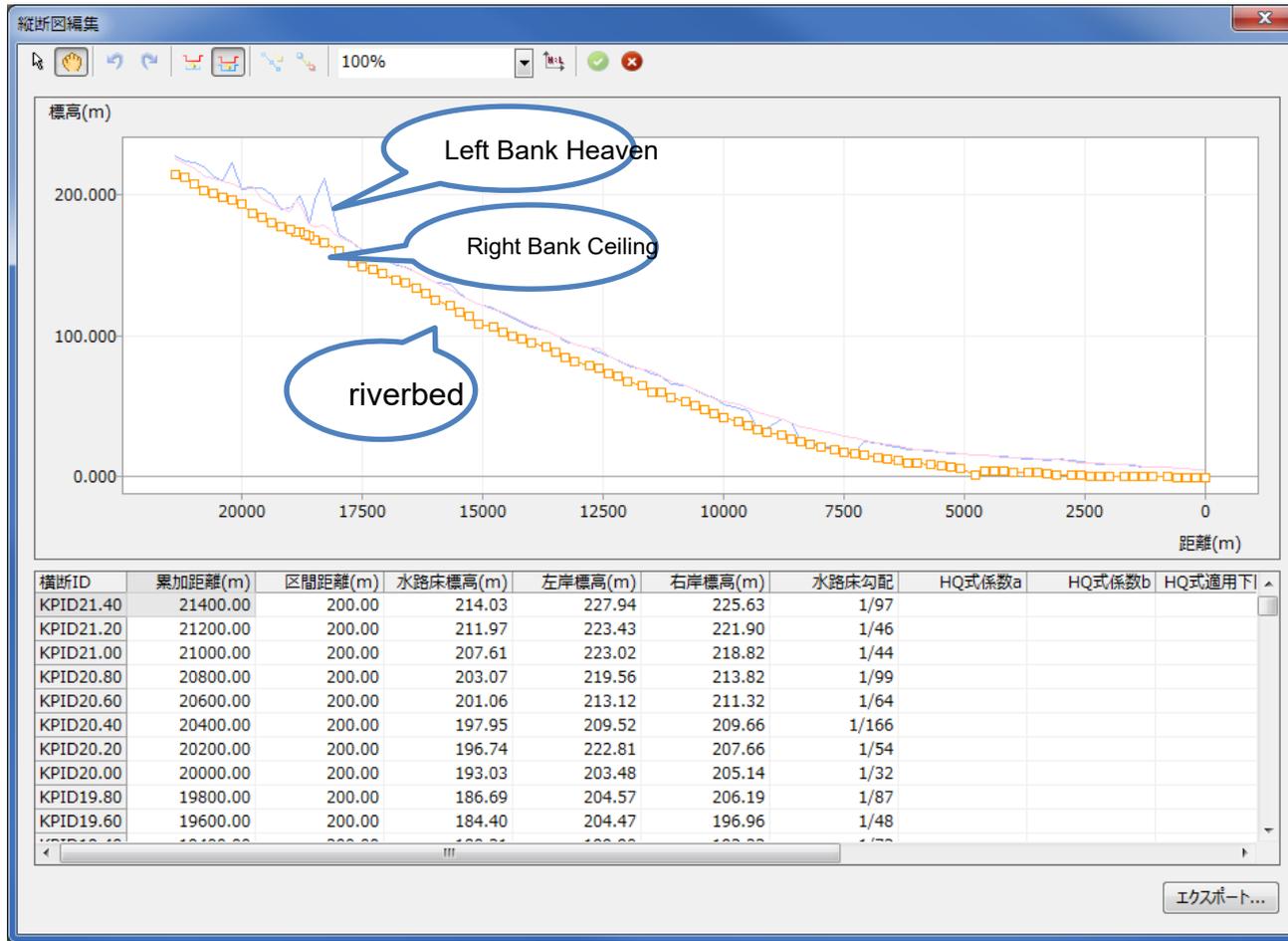
Ingest river data



Review cross-sections HITACHI Inspire the Next



Review profile views



Create a breakage point HITACHI inspire the Next

The screenshot shows the DioVISTA software interface with a 3D topographic map of a river system. A right-click context menu is open over a river segment. A callout bubble points to the river with the text "Right-click River." Another callout bubble points to a specific location on the river with the text "3 Specify the assumed failure point on the map." A third callout bubble points to the "新規作成(N)" option in the menu with the text "2. Select [Create new broken embankment]."

Right-click River.

3 Specify the assumed failure point on the map

2. Select [Create new broken embankment].

Context Menu Options:

- 有効(V)
- 項目の表示(S)
- 断面図表示(O)
- 越流量の集計(E)...
- 左岸線(L)
- 右岸線(R)
- 河心線(C)
- 横断線(T)
- 新規作成(N)
 - 水位計の新規作成(G)
 - 破堤箇所の新規作成(B)
 - 越流堤の新規作成(D)
 - 排水機場の新規作成(P)
 - 横流入量の新規作成(L)
- すべて削除(A)
- 縦断図の編集(V)...
- 合流の指定(F)
- 分流の指定(B)
- この河川を削除(D)

Map Legend (凡例):

- 深点位置
- 北線
- 東線
- 南線
- 西線
- マウス位置
- 北線
- 東線
- 南線
- 西線
- 距離
- 縮尺
- 洪水シミュレーション
- 水深
- 水位
- 流速
- 流速ベクトル
- 流量
- 水量

Water Level Legend (水深[国交省標準(2001)]):

- 3.0m以上
- 2.0~3.0m未満
- 1.0~2.0m未満
- 0.5~1.0m未満
- 0.5m未満

断面図表示 (Cross-section):

- 地形グラデーション
- 地形塗りつぶし色
- 水位を塗りつぶす
- 水位塗りつぶし色
- 水位線スタイル
- ピエソ水頭線スタイル
- 河堤壁(横断面)線スタイル
- 河堤壁(左岸)線スタイル
- 河堤壁(右岸)線スタイル

Calculation execution

The screenshot displays the DioVISTA software interface for simulation execution. The main window shows a 3D topographic map of a river area with various simulation parameters and data. A 'Simulation Start' dialog box is open in the center, with three callout boxes providing instructions:

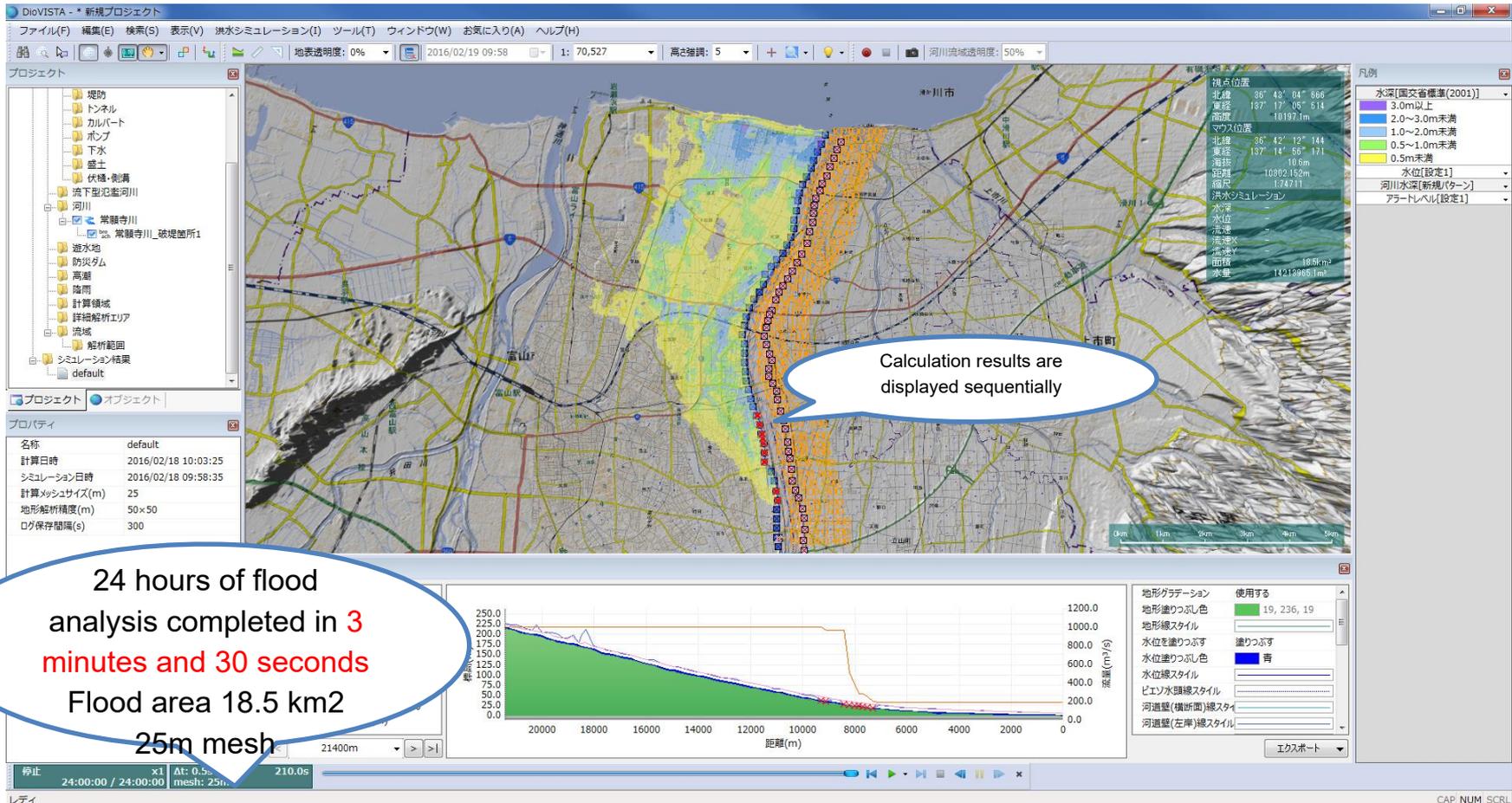
1. Click the Simulation Start button (indicated by a callout bubble pointing to the 'Simulation Start' button in the top toolbar).
2. Specify Mesh Size (indicated by a callout bubble pointing to the 'Calculation Mesh Size' dropdown menu, which is set to 25m).
3. Click Start (indicated by a callout bubble pointing to the 'Start' button in the 'Simulation Start' dialog box).

The 'Simulation Start' dialog box contains the following fields and options:

- Simulation Date: 2016/02/18 09:58:35
- Calculation Time: 24 時間 0 分
- Calculation Mesh Size: 25m
- Flow Discharge Accuracy: 50m
- Options: Groundwater Drainage, Drainage Effective Time, 3-layer Model
- Simulation Results: Save Interval: 300 s, Log File Name: default
- Buttons: 開始 (Start), キャンセル (Cancel)

The background interface includes a project tree on the left, a property panel for '常観寺川' (Tokuganji River) on the bottom left, and a graph showing '河川断面図(常観寺川)' (River Cross-section) on the bottom right. The graph plots elevation (m) on the y-axis (0.0 to 245.0) against distance (m) on the x-axis (0 to 21400).

Calculating ...



The basic formula can be used in accordance with the Flood Inundation Area Drawing Manual (4th Edition).

http://www.mlit.go.jp/river/shishin_guideline/pdf/manual_kouzuishinsui_1507.pdf

Creation of deliverables

1. Right-click the calculation result

2. [Select] Export Format

3. CSV or Select netCDF

4. [Export] Click

計算結果のエキスポート

ファイル形式: netCDF形式

出力先フォルダ: C:\Users\yamaguchi\Documents\Hitachi\DioVISTA\...

ファイル名: default

メッシュサイズ: 1/40 (25m)

時間の起点: 破堤 氾濫

コメント:

圧縮レベル: 9

シンボルマーク番号: 4

エキスポート キャンセル

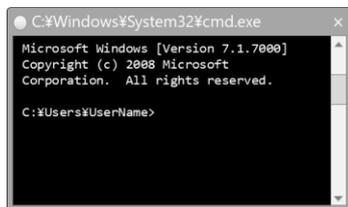
CSV and NetCDF output compliant with the Guidelines for Digitization of Flood Area Map Data (2nd Edition) is possible.

<http://www.mlit.go.jp/common/001097667.pdf>

Also supports batch processing

- Run all BP001~ BP100 projects in the current directory
 - Convert to NetCDF further
 - Current directory: C:\work\result1\
 - Destination: D:\ Delivery ¥1234567890 BP001

command



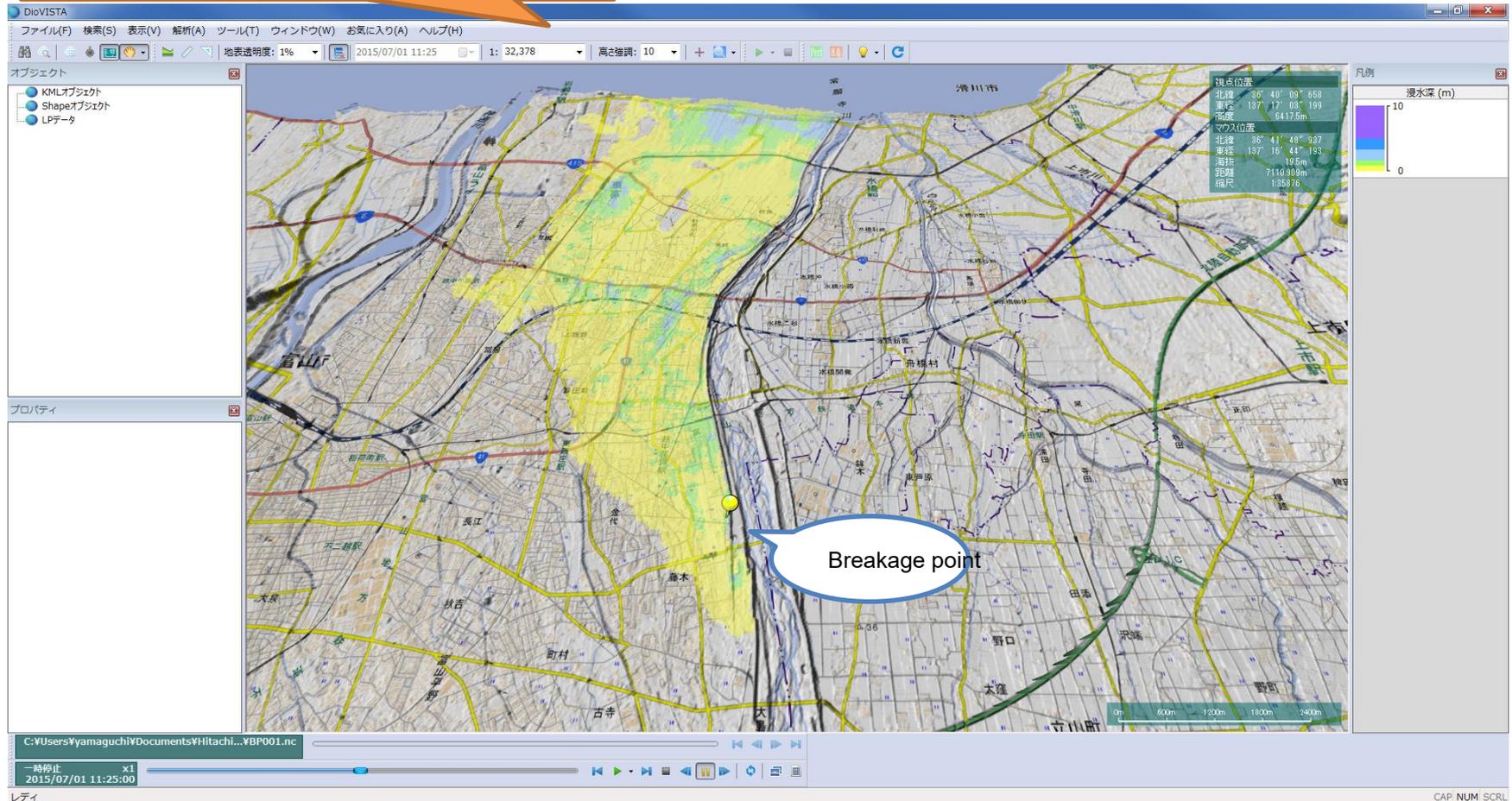
```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 7.1.7600]
Copyright (c) 2008 Microsoft Corporation. All rights reserved.

C:\Users\UserName>
```

```
cd C:\work\result1\ for /d %%f in
(BP???) do ( dfsCalc64.exe
%%f\%%f.fsxproj dfsConv64.exe nc
%%f\%%f )
```

Confirmation of deliverables

Visualization with DioVISTA/Storm ,
a sister product of DioVISTA/ Flood



Visualize NetCDF compliant with the Guidelines for Digitization of Flood Area Map Data (2nd Edition)

DioVISTA/Storm http://www.hitachi-power-solutions.com/products/product03/p03_61.html