



AWE Communications
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Database Conversion

(Propagation Models)

Outline

- Supported File Formats (Urban)
- Options for Conversion (Urban)
- Supported File Formats (Indoor)
- Options for Conversion (Indoor)
- Conversion service of AWE Communications
- Conclusions

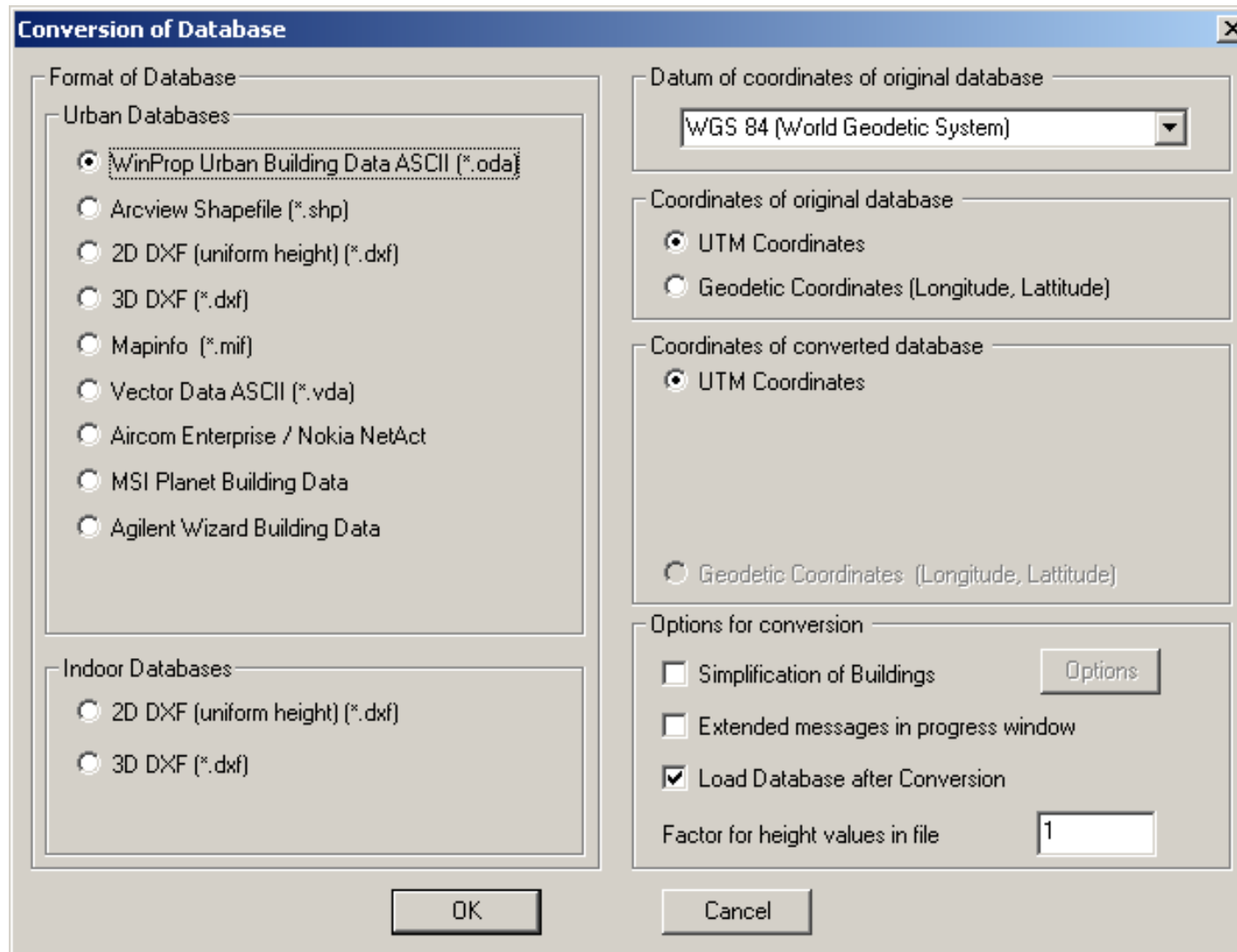
Supported File Formats (Urban) (1/2)

File formats urban building data:

- Aircom Enterprise (Nokia NetAct)
- MSI PLANET (Siemens Tornado)
- VDA (Alcatel A955)
- Agilent Wizard

- MapInfo
- Arcview Shapefile
- DXF 3D (individual heights per building)
- DXF 2D (uniform height of buildings)

Supported File Formats (Urban) (2/2)



Options for Conversion (Urban) (1/2)

Options

- Uniform height or individual height
- Geodetic or UTM input coordinates
- absolute (above sea level) or relative (above ground) building height (if absolute height → Topographical database required for prediction)
- Arbitrary factor for height to convert building heights to meter

Simplification Options

- Delete all buildings with height below threshold
- Combine adjacent buildings with same height
- Delete redundant corners

Options for Conversion (Urban) (2/2)

Options for simplification of urban building databases

Delete irrelevant information

Erase buildings with height below m

Simplification of individual buildings

Reduce number of corners of buildings

Delete redundant corners

Keep original shape

Simplify shape of building (less corners)

Level of simplification

Combination of adjacent buildings

Combination Method

Auto-combination disabled

Auto-combination (Absolute threshold)

Max. height difference for comb. m

Auto-combination (Relative threshold)

Max. height difference for comb. %

Auto-combination (Discrete heights)

Distance between height levels m

Properties (Height, Material) of combined building

Use properties of tallest building

Determine mean values of properties

Use properties of lowest building

Further settings for the combination of buildings

Add automatically courtyards if required

Enlarge buildings during combination

OK Cancel

Supported File Formats and Options (Indoor)

File formats indoor building data:

- DXF 3D (individual planar objects with arbitrary orientation)
- DXF 2D (only objects vertical to xy-plane with uniform height)

Scanned maps/layouts of floors of buildings can be converted to DXF files with tools from AutoDesk (Vectory) or other CAD software products.

Options:

- Arbitrary scaling of coordinates (m, cm, dm, km, inch,...)
- Auto-generation of closed objects (polygons) if only lines are available. Algorithm runs with adjustable parameters (distance between points)

Options for Conversion (Indoor)

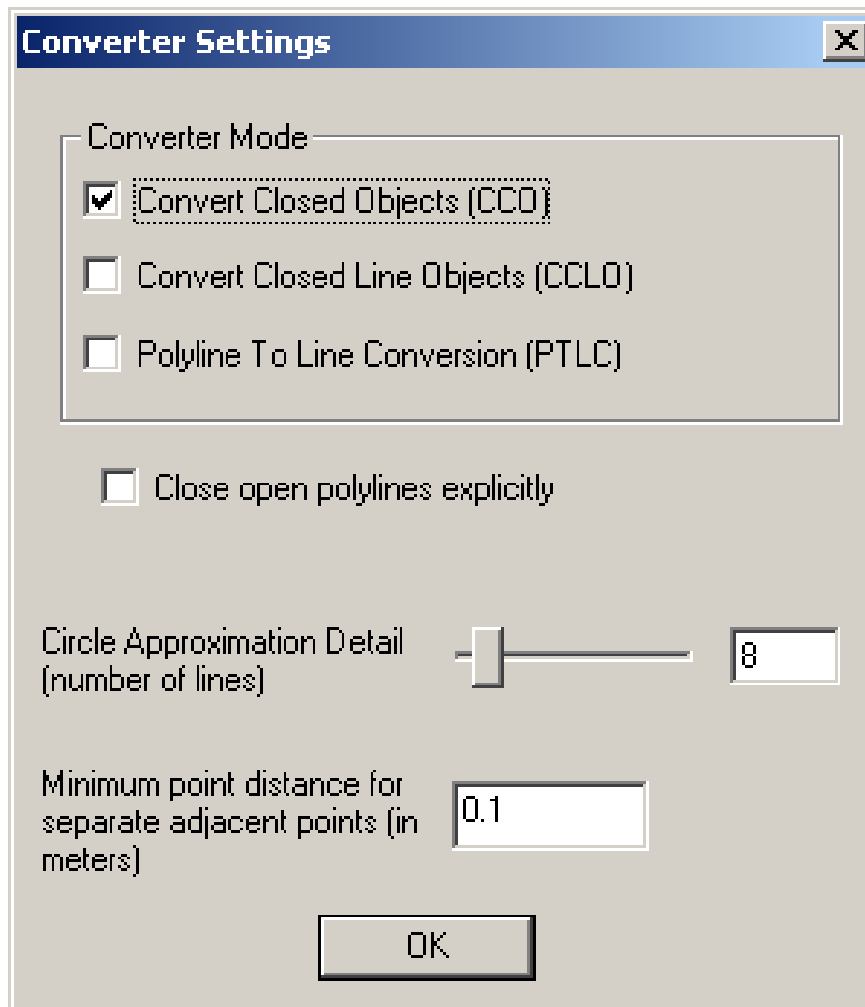
(1/2)

The screenshot shows the 'WallMan DXF Converter' dialog box. It is divided into several sections:

- General DXF Properties:** Includes fields for 'Selected DXF File', 'AutoCAD Version', and 'Number Of Entities'. There is an 'Open DXF File' button.
- Database Type:** A dropdown menu is set to 'Indoor Database'. A 'Create Error Log' checkbox is checked.
- DXF Layers - Select the layers to be converted:** A large empty rectangular area for selecting layers.
- Select dimension of DXF File:** Two radio buttons: '2D Data (only horizontal (x-y) plane)' (selected) and '3D Data'.
- Scale in DXF File:** A group of radio buttons for scale: 'Meter (m)' (selected), 'Millimeter (mm)', 'Kilometer (km)', 'Inch (in)', and 'User defined'. Below 'User defined' is a text box containing '1' followed by 'unit(s) in DXF File'.
- Errors And Warnings:** A large empty rectangular area for displaying messages.
- Buttons:** At the bottom right, there are four buttons: 'Converter Settings', 'WallMan Import Settings', 'Run Conversion', and 'Cancel'.

Options for Conversion (Indoor)

(2/2)



Conversion Service of AWE Communications (1/3)

Conversion service if required converter is not included:

- **Conversion done by AWE Communications**

AWE Communication converts databases for customers.

Fees are depending on the number of objects.

Conversion will be made within one...two working days.

- **Conversion made with free demo version of WallMan**

The customer converts the database with the free demo version of WallMan and sends the data via e-mail to AWE Communications

AWE decrypts the database to be used with customer's license
(databases generated with demo version cannot be used)

Fees are depending on the number of objects.

Encryption will be made within one working day.

Conversion Service of AWE Communications (2/3)

Conversion done by AWE Communications

1. Mail original database to AWE Communications (support@awe-communications.com)
2. AWE will send an offer for the conversion of the database (approx. within 1 day).
Estimated cost: 0.08 EUR per object (urban) and 0.16 EUR per object (indoor).
→ Discounts for large databases! Please ask if applicable!
3. After receiving the PO the database will be converted and returned to the customer (approx. within 1...2 days)

AWE Communications sends the logfile of the conversion together with the database to the customer.

AWE Communications gives no guarantee for the correct conversion.

The conversion must be verified by the customer.

Conversion Service of AWE Communications (3/3)

Conversion made with free demo version of WallMan

Free demo-version of WallMan (www.awe-communications.com) includes all currently available converters. These converters can be used by the customer to convert the database.

1. Download current version of WallMan (www.awe-communications.com)
2. Convert database with demo version
3. Send converted database to AWE Communications
4. AWE Communications will send an offer for the encryption of the database (to be used with commercial versions of WinProp). The offer will be sent within 1 day.
Estimated costs: 0.025 EUR per object
→ Discounts for large databases! Please ask if applicable!
5. After receiving the PO AWE Communications will return the converted database to the customer (within 1 day).

Conclusions

- Wide range of urban database formats are converted
- DXF data (2D and 3D) is supported for indoor databases
- Conversion-Service of AWE Communications
 - Full conversion
 - Encryption of databases converted with free demo version