AED-SICAD – Road Ahead

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Agenda

- AED-SICAD – News
- Roadmap: Versions and major releases
- Existing products – Improvements (UT Desktop, UT Server, UT Integrator)
- New Products
  - UT AppConnector
  - UT Mobile - Runtime Apps
  - UT Server NCS - Network Calculation Integration – Server Based
  - UT Smart Apps
  - UT Search Service
  - UT ETL
- GN, ArcGIS Pro and prototype UT Pro: Advantages for SIG
- Interesting projects with other clients interesting to SIG
- Roadmap novaKANDIS
- Work with ConnectMaster
AED-SICAD – New Owners

- As of June 2017: Battery Ventures
  - Offices in Silicon Valley, Boston, London and Israel
  - Global, software-focused investment firm
  - Close and good cooperation
  - Want to grow AED-SICAD mostly by inorganic growth to 100 – 150 Mio EUR turnover within the next 5 – 10 years

- Effect for AED-SICAD
  - Product positioning, roadmap and strategy remains the same
  - General strategy remains the same
  - Dr. Thomas Englert (68 yrs), CEO, stepped down end of 2017
As of Oct. 2017, Battery Ventures acquired another Esri Platinum Partner: Latitude Geographics, Canada

- Manufacturer of a web framework for Esri customers – „Geocortex“, worldwide customers
- Now two Esri Platinum Partners under the same umbrella
- Further acquisitions expected
Recent New Customers

- EVM, Koblenz, Germany
- City Works of Rottweil (ENRW), Germany
- City Works of Kassel, Germany
- Wiener Netze – District Heating, Vienna, Austria
- EANDIS, Belgium
- Infrax, Belgium
- Elektro Gorensjka, Slovenia
- Pavia Acque, Italy
- City Works Andernach, Germany
UT - Product Architecture

UT Mobile

Smart Devices
- UT Mobile Clients
- ArcGIS Enterprise

Web Clients
- UT Web Clients (JSC / HTML5)
- ArcGIS Enterprise

Smart Desktop
- UT Asset Manager
- ArcGIS Engine

Full Desktop
- UT Editor / UT View
- ArcGIS for Desktop

UT Server
ArcGIS Enterprise (ArcGIS Server)

UT Integrator
- UT Integrator
- UT AppConnector
- UT Smart Apps

Enterprise GeoDatabase

External Systems

New functionality
## Current Releases

<table>
<thead>
<tr>
<th>Release</th>
<th>Release Date</th>
<th>Status</th>
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<tbody>
<tr>
<td>UT R3</td>
<td>August 2018</td>
<td>General Availability</td>
</tr>
<tr>
<td>UT V10.2.1 R3</td>
<td>March 2016</td>
<td>General Availability</td>
</tr>
<tr>
<td>ArcFM UT V10.2.1 R2</td>
<td>June 2015</td>
<td>Extended Support</td>
</tr>
<tr>
<td>ArcFM UT V10.2.1</td>
<td>May 2014</td>
<td>Mature Support</td>
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Esri Versions

- **Version 10.2.1 and 10.6.1 as basis for „Utility GIS“**
  - In line with Esri strategic approach to utility market
  - Support for 10.2.1 until 2021 and for 10.6.1 until 2024
  - UT for ArcGIS VR3 is certified for 10.6.1
  - At medium range no need to upgrade base technology
  - Further developments in the area of Server based on the latest technology

- **Esri strongly recommends to utilities to use**
  - ArcGIS V10.2.1 (+ applicable patches, currently UTUP8) and ArcGIS V10.6.1 for desktop
  - New developments of the ArcGIS platform such as ArcGIS 10.6 for Server
UT for ArcGIS – Editing Strategies – ArcGIS Pro

- Editing should be possible in many scenarios
  - Web – Mobile – Desktop

- ArcMap/ArcCatalog in ArcGIS → ArcGIS Pro
  - UT Editor as „High-End“ Editor will be re-implemented based on ArcGIS Pro → UT Pro

- Geometric Network (GN) → Utility Network (UN)
  - Different data model → UT objects remain UT objects
  - UT Data ETL „feeds“ UT Pro with data

- Functionalities
  - We cannot / will not convert all current UT functionality exactly 1:1
  - UT Pro Plan → Editing functions without Utility Network
    - Planning and editing of alpha-numerical data
  - UT Pro Edit → Editing functions with Utility Network
Roadmap – UT for ArcGIS

- **UT for ArcGIS 10.2.1 R3** (2016)
- **UT Data ETL** (2017)
- **UT Pro View** (2018)
- **UT Pro Plan** (2019)
- **UT Pro Edit** (2020 - 2021)
The new Web GIS products will need simpler data structures
• Information products for UT Mobile Runtime or for UT Pro
• UT Data ETL feeds UT Mobile and UT Pro with data from UT1021R3
## UT Data ETL – Providing Data for UT Pro

<table>
<thead>
<tr>
<th>UT V10.2.1</th>
<th>UT ETL</th>
<th>UT Pro</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ArcMap-based</td>
<td>• Transformation Classic UT data in Basic FCL UT</td>
<td>• ArcGIS Pro-based</td>
</tr>
<tr>
<td>• Feature and object classes</td>
<td>• UT repository is also migrated</td>
<td>• Only 5 feature classes</td>
</tr>
<tr>
<td>• Geometric Network</td>
<td></td>
<td>• Utility Network</td>
</tr>
<tr>
<td>• UT object model with class IDs and subclass IDs</td>
<td></td>
<td>• UT object model with AssetGroups and AssetTypes</td>
</tr>
</tbody>
</table>
UT for ArcGIS – Next Generation Product Architecture

- UT Pro Edit and UT Pro Plan to author and plan assets
- UT Mobile for mobile work
- Web Apps for UT Server
- UT Server for data access
- UT Integrator – integration with other systems

UT Server

ArcGIS Enterprise

UT Integrator

Smart Devices
- UT Mobile
  - ArcGIS Runtime

Web Clients
- UT Web
  - ArcGIS Enterprise

Smart Desktop
- UT Pro Plan
  - ArcGIS Pro

Full Desktop
- UT Pro Edit
  - ArcGIS Pro

Enterprise GDB

Externes System

18.09.2018
UT Integrator
UT Integrator

- Bi-directional
- Establishes mapping between GIS and SAP model
- Interfaces
  - SOAP (e.g. Enterprise Services, SAP PI)
  - REST (e.g. SAP Gateway)
  - IDOC
  - RFC
  - Table Reader
  - CSV files
- May “talk” to other EAI busses
- Reliable and secured communication

✓ Certified by SAP for Integration with SAP ERP
✓ Available in SAP App Center ([https://www.sapappcenter.com/](https://www.sapappcenter.com/))
The Technology

- SAP frontend integration framework of AED-SICAD – the perfect frontend
- UT Integrator of AED-SICAD – keeps GIS and SAP databases in sync
- SAP Certified
Benefit – Backend Integration

- Data are consistent
- Critical for efficient and integrated business processes
- Secured transactions between ERP and GIS
- Avoiding redundant data entry
- Easy configuration
Email Pictures to the GIS!

Upload in your smartphone the georeferenced photo to an email

iOS, Android or Windows

UT Integrator Creates in GIS Points with Attached Photos

✓ Very simple way to place field notes and pictures into the GIS!
Assets are Consistently Enriched by GIS and ERP

- One asset (e.g. Water Pump) may be
  - Step 1: First created in SAP ERP (e.g. procurement) or vice versa
  - Step 2: Then enriched by UT (geographic location, as-built)
  - Step 3: Further enriched by SAP ERP (e.g. maintenance info added)

✓ Managed by UT Integrator
UT AppConnector

- Extremely fast communication of UT Clients with third party IT systems
  - 2-way communication via WebSocket Server
  - E.g. zoom-to UT Asset
  - UT Editor, UT Asset Manager, UT Web Client
  - Also possible with the use of Citrix
  - Server license
  - Remote IT Application: Must integrate WebSocket libraries

- **Web Socket**
  - Standardized communication protocol
  - Full duplex communication via single TCP connection
UT AppConnector

- **Default commands**
  - Zoom to a certain coordinate area
  - Zoom to or pan to an UT object / asset
  - Show alpha-numerical data and assignments of an UT object / asset
  - Show UT objects in the UT object list.

- **Custom commands possible**

- **Example: See movie – integration**
Example Integration with ConnectMaster
NEW: UT Search Service

- Very fast search through all UT data
- Indexing on all UT data
  - Service
  - Provisionning of a global indexing directory
- Search service
  - Web service
  - Request via HTTP / REST / SOAP
  - May be used by all clients (web, mobile, desktop)
  - Search entry line & result list
  - Server License
NEW: UT Search Service – Overview

- Frontend
- Search Services
- Search
- Indexing
- Data
News – UT Server V10.2.1R3

- **New UT WebApp Viewer**
  - Based on ESRI JavaScript API and ArcGIS WebApp Builder / Portal for ArcGIS
  - Same functional scope as Silverlight client
  - Responsive user interface
  - Smart mobile (online)
New: UT WebApp Viewer
UT WebApp – Editing with TaskManager

- Will be released in 2018

- Display and editing of UT Data via UT WebApp EDIT

- Not meant as a replacement for UT Editor (desktop) editing functions
  - Simple, focused editing tasks

- UT TaskManager as a modular solution which can be adapted by configuration in any way
  - Administrators may create their own editing task without coding.
  - New functions may be created as independant slides / actions.

- Integration into other JavaScript web GUIs possible
UT TaskManager – Use Cases

- Creation of simple objects without graphics (e.g. person)
- Creation of simple objects with graphic (e.g. info objects, outages...)
- Adapting the geometry of existing objects
- Creation of dynamic data (e.g. meter readings, maintenance...)
- Editing of simple attributes
- Deleting of simple objects
- Creation of an electricity service point connection
UT Task Manager Concepts – Drag & Drop

**Task Selector**
- Search UT objects
- Select UT objects
- Start editing

**Slides**
- Create Geometry
- Edit attributes
- Confirm

**Actions**
- Snapping
- Save
- Create template objects
- Map Refresh
- Start editing

**Configuration: Delete person**
1. Create info object
2. Create service point connection
3. Select UT object
4. Delete person
5. Search UT object
6. Start editing
7. Confirm
8. Save
Task – Create Construction Site

- Outline the construction site
- Add attribute values or change these
- Configuration of visible and editable fields
Task – Assign Location to Drill Protocols

- Drill protocol as a point in the GIS and adding document to the DMS
- Linking of DMS identifier and URL with UT object
UT Server Add Data – Integrate CAD files

- Add DXF files as temporary layer within the web GIS
WebApp Viewer: Temporally Working Offline

- Geodata are cached within the Internet Browser
  - May be configured for certain object classes,
  - Certain attributes
  - Geo and alpha-numerical data

- Limiting factor: Memory space of browser
UT for ArcGIS – Mobile Solutions

- **UT Asset Manager**
  - Offline
  - Replication of data
  - AG Engine

- **UT Web App Viewer**
  - Online
  - ArcGIS Web AppBuilder

- **UT Mobile**
  - Online & Offline
  - AG Runtime
  - UT Data ETL for data replications
UT Mobile - Functionality

You can use your finger to do redlining, identify and selections.

Create and display result list

Show UT Alpha-Numerical data, also offline
UT CBYD – New Functionality

- New widget to display layer list
- Logging when download was executed
- New mechanism for Custom Widgets
- Improved security
- Restricted areas with user administration
- Logging of „affected branch“ within feature class
- Attached UT documents may be added to the CBYD answer
- Flexible management of requests in administrative GUI
- News ticker widget to show notifications
- Storing of requested geometry
- Scale-dependant plots for the branches
- Browser – Safari
Thank You for Your Attention

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