ArcGIS Pro Tasks: An Introduction

- Jason Camerano
- Amir Bar-Maor
Live Call With Esri Technical Support

- Esri Technical support: Jason
- Customer: Amir
- Warning: there is a test in the end of the presentation
Amir (Customer)
• Every user does things differently

Jason thinks… Technical Support
• No best practice
Amir (Customer)
- People make mistakes

Jason thinks… Technical Support
- No quality assurance
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Amir (Customer)
- Mistakes cost $$$

Jason thinks... Technical Support
- Catch errors as they happen
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Amir (Customer)

- Complaints updates take “too long”

Jason thinks... Technical Support

- No metrics
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Amir (Customer)
- Training new employees takes a long time until they become productive

Jason thinks… Technical Support
- Transfer business knowledge
- Learn how to use the software

Doesn’t seem to like new employees
I hope he doesn’t find out I’m a new employee
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Amir (Customer)
- Don’t people know how to read a manual?

Jason thinks… Technical Support
- Dynamic help that follows your steps
Amir (Customer)

- Our organization is special

Jason thinks… Technical Support

Heard that before…
Amir (Customer)
- Technology changes fast
- I remember my first GIS course on ArcInfo…

Jason thinks… Technical Support
- 1996… I was a toddler
Create New Building Workflow

Locate Work Area
• By address or Subdivision name

Select Subdivision
• Copy the Subdivision name

Create New Buildings
• Make sure they don't overlap

Attribute New buildings
• Paste the subdivision name, populate attributes

Save Edits
• Never forget to save edits
Demo: Help needed!

- Jason – please share your screen
What is a task?

• **Sequential** steps that guide you through a **repeatable** workflow

• **Tasks:**
  - Used to **guide** and share knowledge
  - Are **interactive**
  - Improve **efficiency**
  - Improve **quality**

• **Tasks use your (business) language**

• **Tasks are configurable**

“The right tool in the right time”
Demo: Creating a Task

- Jason – please share your screen
Design a task

- Know your business and workflows
- Repeatable workflows
- Know your project:
  - Maps
  - Layers
  - Tools
  - Add Ins
- Know your users:
  - Roles
  - License level / extensions
  - Permissions
  - Environment
Insert a new Task Item

• A project might contain zero to many TASK ITEMS that are stored in the APRX file.
• Use Insert tab → Task Item.

• Use ‘Save Project’ to save task modifications.
• Use ‘Package Project’ to share with a project.
Create Tasks & Steps

- Create a task
- Create steps
- Group tasks
Live Call With Esri Technical Support

- Esri Technical support: Jason
- Customer: Amir
- Reminder: don’t forget the test
Create New Building Workflow – Simplified version

**Locate Work Area**
- By address or Subdivision name

**Select Subdivision**
- Copy the Subdivision name

**Create New Building**
- Make sure they don't overlap

**Attribute New building**
- Paste the subdivision name, populate attributes

**Save Edits**
- Never forget to save edits
Create New Building Workflow – Real version

1. Get Work Order ID
2. Keep Time Record
3. Locate Work Area
   - By address or Subdivision name
4. Select Subdivision
   - Copy the Subdivision name
5. Create New Buildings
   - Make sure they don’t overlap
6. Fix Errors
7. Move Features
8. Validate Geodatabase Topology
9. Attribute New building
   - Paste the subdivision name, populate attributes
10. Save Edits
   - Never forget to save edits
11. Review and Fix Attribution Errors
12. Write End Time
Common User Errors

- Forget to attribute some of the attributes
- Wrong attribution, like mistype of the subdivision name
- Select the wrong features
- Forget which features were they created in the work order
- Time reporting is a challenge (coffee breaks, emails…)
Demo: Enhanced Task

- Jason – please share your screen
General – Step Behavior

- Manual – 2 mouse clicks
- Auto Run / Auto proceed – 1 mouse click
- Automatic – no mouse clicks
Demo: Sharing a task & Task History
Sharing tasks

- Best method: as a project package

OR between projects:
- A task item can be shared via a task file
  - .esritasks file
- A task file can be imported into a project
- A task item is an AGOL item and can be shared via email
Task History (metrics)

- Optional project Settings (project options)
- Measures duration of each task; idle time is filtered
- Great to visualize with charts
When NOT to use Tasks?

• A workflow that takes very long time
• Task resources keep changing frequently: maps, layers, Geoprocessing tools
• Micro Management tool
• Does not replace Geoprocessing models:
  - Geoprocessing is used for **automation**
  - Tasks are **interactive**
Tips & Tricks

• Global shortcuts:
  - Alt X – RUN (‘eXecute’)
  - Alt C – NEXT STEP (‘CCountinue’)
  - Alt S – SKIP (‘Skip’)

![Image of a computer interface with options for Skip, Run, and Next Step]
Tips & Tricks

- When a task fails…
  - Check if the command is enabled
  - Commands are contextual
  - In this example: calling the select command without an active map view
Tips & Tricks

• Close panes.
• Don’t “buddy-up” the task pane with other panes
• Can I run other commands while running a task?
  - Answer: Yes
• Leave nothing to chance!
  - your users might:
    - Close maps
    - Turn layers off
    - Clear selection
    - Unselect a layer
    - …
Tips & Tricks

• Dock the task pane and task designer side by side
• Record commands is easier and more reliable

[Images of task pane and task designer with annotations for recording and docking]
Tips & Tricks

• Capture map view state (contents)
Tips & Tricks

• Use ‘Optional’ step behavior during design (Skip)
• Copy paste steps between tasks, or tasks between task items
• Advanced ‘If-Than’ logic → use Geoprocessing scripts/models as a step
Tips & Tricks

• Configuration Vs. Customization: consider tasks before writing Add Ins
• Tasks have SDK
• Create tasks that save time & improve quality
• Tasks are available in every license level ✓
• Tasks replace Geoprocessing models ✗
• Tasks can be shared between projects ✓
• The best way to share a task item is to package it in a project package ✓
• Manual behavior is the most efficient step behavior ✗
• Tasks are fan-task-tic! ✓
Summary - Tasks Improve Efficiency

- Reduce learning curve time
- Open the right tool at the right time
- Open the right map & layer settings
- Reduce mouse clicks
- Reduce clutter (panes, ribbons, etc.)
- Selection management (save, load, clear)
- Attribution: get, copy & calculate actions
- Prevent mistakes: verification action
- Open a tool set: palette
Summary - Tasks Share Knowledge

- Define best practice workflows
  - Multiple ways to do the same workflow
  - Reduce confusion
  - Improve quality & Consistency
- Guide
  - Dynamic help / instructions
  - Link to additional resources
  - Use your (business) language
- Share
  - Export a ‘Task Item’ to a ‘Task File’
  - Upload task file to ArcGIS Online

Tasks are interactive
As a task author I can share a local task item as an online item.

Later I can update the online item.

Notify users to update their local task item.

Online task item relies on permission user’s level.
Want to learn more?

• Software help documentation
  - Tasks in ArcGIS Pro

• Training:
  - Create and Share ArcGIS Pro Tasks (60 minutes, free)
  - Automating Workflows Using ArcGIS Pro Tasks (3 hours)

• Videos: esri / YouTube
Join the Task Force

- Contribute your ideas:
  - Geonet ideas: [https://geonet.esri.com/community/arcgis-ideas](https://geonet.esri.com/community/arcgis-ideas)

- Visit us at the Geodata / SDK island:
  - Christine Leslie
  - Narelle Chedzey
  - Jason Camerano
  - Amir Bar-Maor
Technical Workshops

• ArcGIS Pro Tasks Tips and Tricks
  - Tue 7/11/2017, 11:00 AM - 11:30 AM, Tech Theater 17 Exhibit Hall A

• ArcGIS Pro Tasks: An Introduction
  - Tue 7/11/2017, 03:15 PM - 04:30 PM, Ballroom 06 B

• ArcGIS Pro Tasks: An Introduction
  - Wed 7/12/2017, 08:30 AM - 09:45 AM, Hilton - Sapphire Ballroom M/N

• ArcGIS Pro Tasks Tips and Tricks
  - Thu 7/13/2017, 11:00 AM - 11:30 AM, Tech Theater 17 Exhibit Hall A
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Use of Tasks for 3D Analysis Workflows
Use of Tasks for Military Workflows
Use of Tasks for Indoor Routing Workflows
Use of Tasks for Zoning Design Workflows