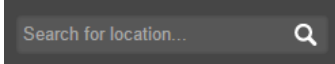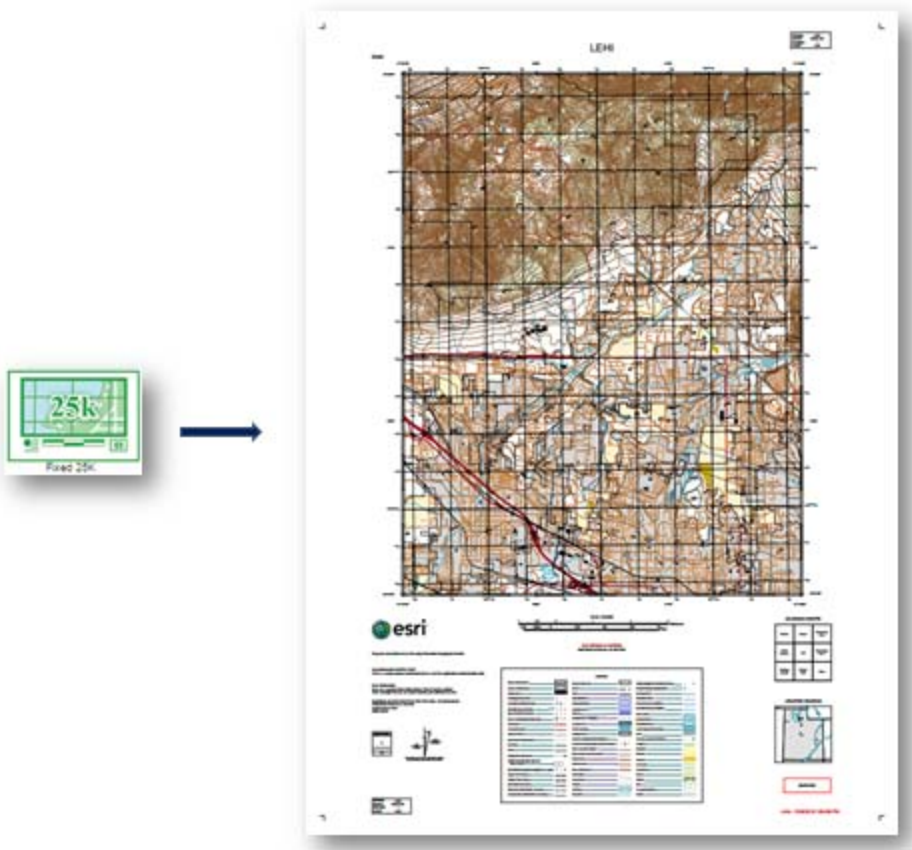# Product-on-Demand (POD) User Guide

Introduction

This guide describes how to use different features of the "Product on Demand (POD)" sample web application available with the Production Mapping Extension for ArcGIS Server. This is specific to the web application hosted at http://pod.arcgis.com which allows you to experience POD's full functionality with a few simple samples. This site is for demonstration only and is preconfigured with four different sample products that you can use to create a map for a geographic area of your choice. The code for this application can be downloaded from the Github repository located at https://github.com/Esri/Product_On_Demand.

Terminology:

Product	Represents a map type that can be created using POD. A product is characterized by its content, layout and mapping context for which that map can be used. It serves as a template for creating several maps with the same layout but covering different areas on ground. Organizations can host a variety of products on POD such as transportation maps, topographic maps, general purpose point-of-interest maps, allowing a large community of users access via a single POD site.
"Choose a Product" button	Can be expanded to view the list of available products. Product properties can be set, for example the export file format. The set of available properties will change based on the chosen product.
Map extent	This represents a specific area on the ground for a given product. The map extent can be predefined, or can be calculated based on user specifications. This is configured by the administrator who sets up a product to be hosted in POD.
"Choose a Tool" button	Can be expanded to select from a list of tools for managing map extents. The list of tools in the toolbox can vary based on chosen product, and is configured by the POD administrator.
Export queue ⬇ Export Queue	A collapsible tab to view a list of maps which are ready for export. When you select or create map extents, they are added to the export queue. The export queue can be populated with several map for different products, allowing all of them to be exported in a batch.
Export preview	A low-resolution image of the final map. It is accessible through the export queue and can be used to get a quick idea of the layout or coverage for a specific map.
Search bar Search for location... 🔍	Allows you to search for a location on the ground by name, e.g., Los Angeles, or geographic coordinates for a location in its Lat-Long, e.g., 34N, 118.25W. For certain products that use predefined map extents, the search can also locate specific maps by its name. This needs to be configured by the POD administrator.

Create Maps for the Fixed25K Product

This product is an example of a map product where the area on the ground and other features of the map, such as scale and page size, are based on an existing specification and cannot be changed. In this case, the map extents are based on a preexisting areas that represents a 1:25000 scale map that fits on 25x35 inches page. This is based on the Civilian Topographic Model (CTM) specification published with the Production Mapping Extension for ArcGIS. Note that in this sample, limited amount of data enough for 4 maps just south east of Salt Lake City, UT, USA is loaded.

Create a map with predefined extent

1. Click the Product button and select Fixed25K .
   - Once selected a new basemap and a map index is displayed.
   - The toolbox is set to "Select an existing extent from the extent layer" tool.
2. By default, the export format is set to PDF. Change to another format by selecting from the dropdown if you like.
3. In the Search Bar type 'Salt Lake City Utah'.
4. Right-click to open the context menu and use the navigation tools to zoom in closer to communities just south east of Salt Lake City.

5. Click on the cell north of Utah Lake over the "Lehi" community.
   - This adds one map extent for "Lehi" to your export queue.

6. Click the icon to expand the export queue.

7. Click this icon for "Lehi".

   - Additional information about the map, including product name, export format, and map name are displayed.
   - The outline of the page is displayed on the web map.
   - A spinning icon indicates a preview is being generated. When complete, the spinning icon is replaced with the thumbnail of the map's preview.

8. Click the hyperlink below the thumbnail to preview the map.
   - For the preview feature to work it must be enabled by the POD administrator which has been done for this sample site.

9. Click Export Products button to produce an output for this map.
   - When export starts, a progress indicator displays the time remaining.
   - When complete, the hyperlink for that map is added.

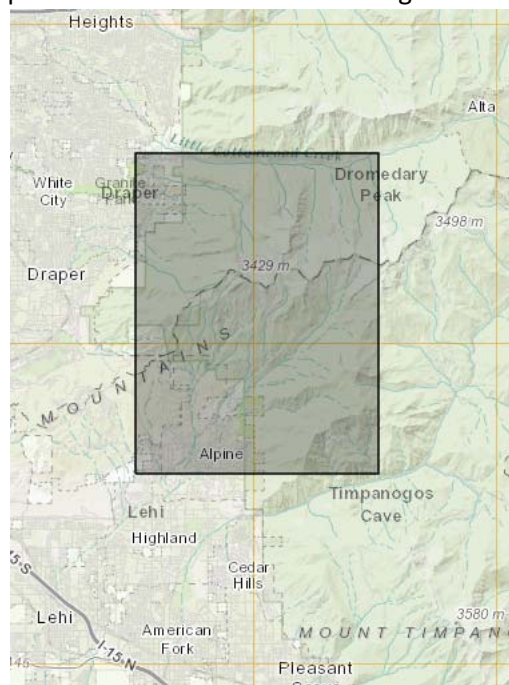10. Click the "Fixed 25K, Lehi, PDF" hyperlink to open the map output.

Create a map with custom extent

In the previous example, we selected an existing map extent. Now we will create a custom map extent that matches the 1:25000 topographic map specification, but overlaps parts of existing map extents.

1. In the same area north of Utah Lake (zoom out if you need to), you can see additional communities, including Draper and the nearby mountain ranges.
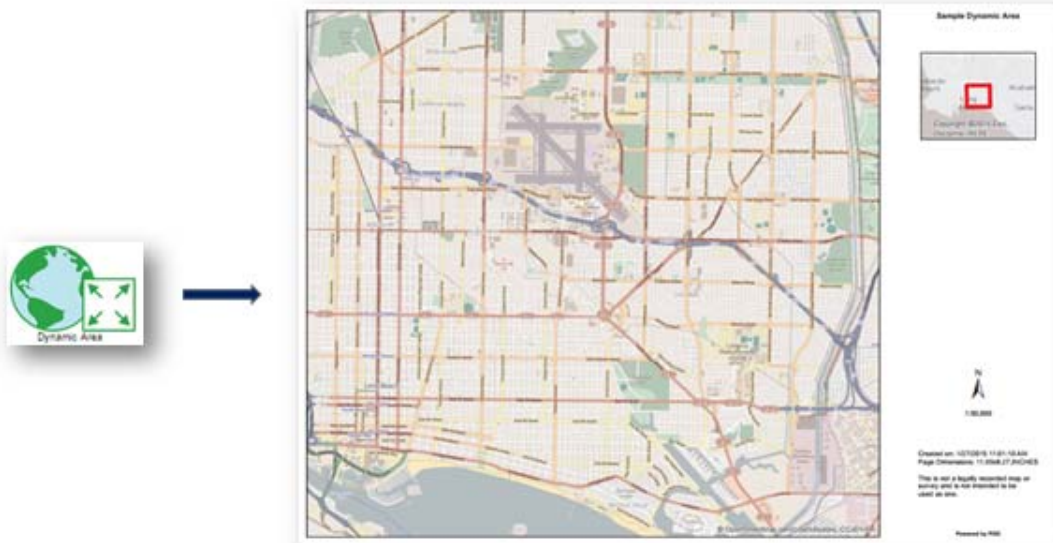
2. Using the "Choose a Tool" button, change the tool to "Create a new extent." Move the pointer over an area that overlaps several existing map extents near Draper and click to drop a point.
   - A new map extent is created and added to the export queue.
3. Change the tool in the toolbox to "Move a custom extent." Click on this map extent and while pressing the left mouse key down move the map extent to an area that covers parts of the Lehi and Draper sheets and the mountain ranges to the east of these communities.

   - Notice that the preview is regenerated in the export queue based on the new location of the map extent.
4. Enter a custom name in the export queue window before exporting. The text entered here will appear in the final map.

Create maps for the Dynamic Area Product

This product is an example of a map product where the map extent is calculated based on user-defined inputs for map scale, page size, and location of the map.

Create a custom extent

1. Use one of the navigation tools or Search bar to navigate to California.
2. From the "Choose a product" button, select Dynamic Area.
    - Notice that the map changes to a different basemap.
    - Notice there are more options to choose a scale, page size and orientation for this product.
3. Set Scale to '1:500000', Page Size to 'A4' and Orientation to 'Landscape'.
4. The tool "Create a new extent" should be selected by default in the toolbox. If not, select it using the "Choose a tool" button.
5. In the map, click to drop a point over Los Angeles area. A map extent is created whose size and shape is based on the set scale, page size and geographic location.
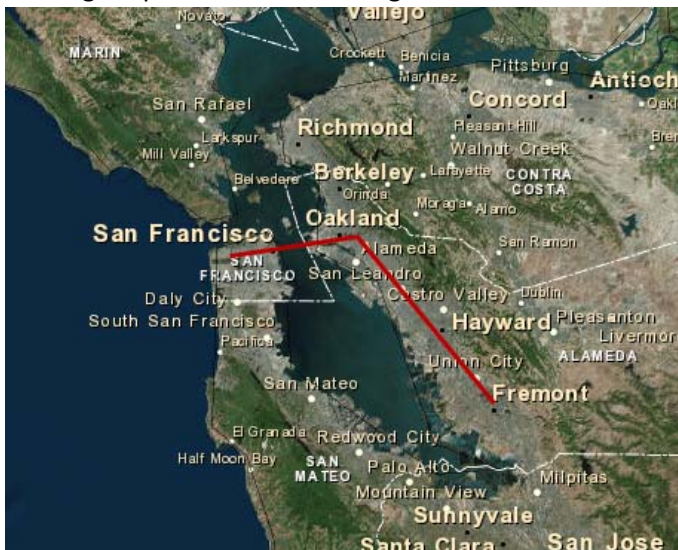

6. Experiment with creating more extents, if needed, by specifying different scale or page size.
7. Use one of the navigation tools to zoom out till you see some countries near South America.
8. In the toolbox, change the tool to "Move a custom extent". Click and drag the map extent for 1:500000 from Los Angeles to South America say over Ecuador.

- You will notice that the shape of the map extent changes. The shape is recalculated to take into account the location on the earth ensuring the map extent is accurate at different latitudes in the maps projection.

We will continue creating additional maps for this product.

Create a series of maps

1. Using the navigation tools, pan North and zoom to the San Francisco Bay Area.
2. In the toolbox, change the tool to "Create new extents with a polyline." We will use this tool to create multiple sheets representing a driving route from San Francisco to Fremont, through Oakland.
3. Click the Product button, change the Product properties for Dynamic Area – set export format to "MultiPage-PDF" the Scale to '1:25000', Page Size to 'Letter' and Orientation to 'Portrait'.
   - A "MultiPage-PDF" format combines several individual map pdfs into one single pdf file.
4. Click in the web map to start creating a route. You don't need to create a route with fine details - a rough representation is enough for this exercise. Here is an example.
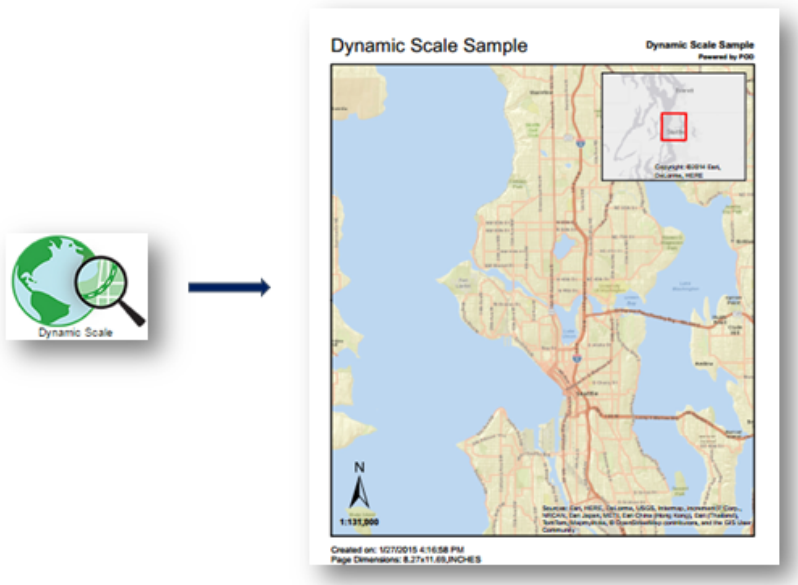

5. Double-click to finish the route.
   - When complete, several map extents are added and the export queue is populated.
   Note: Previews are not generated for the Dynamic Area Product. The generation of previews is is disabled for this product.
6. Expand the Export Queue if needed, then click Export Products to export all the products at once.
   When the export is finished, click on the hyperlink to open or download the file.

Create maps for Dynamic Scale Product

The Dynamic Scale Product is an example of map product where the scale of the map is calculated based on user-defined inputs for an approximate ground area, output page size and location where the map will be created.
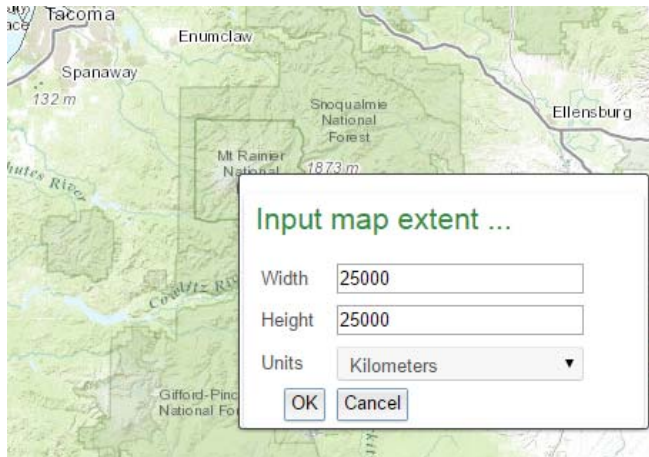
Create a custom extent and determine scale

1. Use one of the navigation tools or search bar to navigate to Seattle, Washington.
2. From the "Choose a product" button, select Dynamic Scale.
   - The tool "Create new extents with a polygon" is selected by default in the toolbox.
3. Sketch an area over Seattle that represents the approximate extent for mapping. This can be a freehand-drawn area.

   - When complete, the scale of the map is printed on screen inside the map extent representation along with length and width of the shape. You can refine the extent be redrawing a new area. Alternatively in the next step you will use exact dimensions to define the map extent and determine scale.

4. In the toolbox, select the tool "Create a new extent," then drop a point over Mt. Rainer. You will be prompted to enter a dimension for the map area in ground units. Set the Width and Height to 25000 Kilometers.

- The scale for this area is now calculated.
5. Expand the Export Queue if needed, then click Export Products to export all the products at once. You can also click to select specific map to export only selected ones.

Create maps for Dynamic Page Size Product

The Dynamic Page Product is similar to the Dynamic Scale product, but instead of scale, the required page size is calculated for the user. The page size is calculated based on user-defined inputs for approximate ground area, scale and location where the map will be created.

Once calculated, the dimensions display along the height and width of page when the map is selected in the export queue.

Create a custom extent and determine page size

1. Use one of the navigation tools or search bar to navigate to Boston, Massachusetts.
2. From the "Choose a product" button, select Dynamic Page.
   - Note the default tool set is "Create new extent with polygon".
3. In the product properties change the scale to 100000.

4. Sketch an area over Boston similar to the earlier workflow.
5. Expand the export queue and select the map added.
   - Note the page size is displayed on the page.

Disclaimer

This site is created solely for demonstration purposes. Any map created using this site should not be used for any commercial application. For additional questions regarding POD or Production Mapping for ArcGIS Server contact: mailto:productionmapping@esri.com