



What's New at ArcPad™ 6

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What's New at ArcPad 6

Introduction ArcPad™ 6, the latest release of ESRI's mobile mapping and geographic information system (GIS) technology, provides several major enhancements including a new development software product for customization; improvements to key functions such as editing, query, navigation, and map display; extended global positioning system (GPS) support; internationalization and localization; and continued growth as a mobile client in the ArcGIS™ family of products.

Customization: ArcPad Application Builder

Creating a personalized and customized field solution for data collection and updates is essential to ensure the integrity and value of your GIS data. ArcPad 6 users can now personalize and customize ArcPad using the ArcPad Application Builder. The ArcPad Application Builder bundles a desktop customization application called ArcPad Studio, ArcPad 6, detailed documentation, sample code, and first year's maintenance.

All customization for ArcPad is performed on the desktop primarily using ArcPad Studio and deployed with ArcPad on the mobile device. The ArcPad Application Builder enables users to

- Create new toolbars that contain built-in and custom tools.
- Design custom forms to streamline data collection in the field.
- Build applets that focus on unique goals.
- Write scripts that interact with ArcPad software's internal objects.
- Develop extensions to support new file formats and positioning services.

Key New Features

ArcPad 6 also addresses a number of key issues in the core product including data formats, display and query, editing and capturing data, GPS support, the ArcPad tools for ArcView® 3.x, and the addition of the ArcPad tools for ArcGIS Desktop.

Supported Data Formats

ArcPad 6 combines the ArcPad 5.x symbology file (APS), the ArcPad 5.x form definition file (APF), and the ArcPad 5.x simple metadata file (SPI) into a single ArcPad layer file (APL). The ArcPad 5.x files are no longer supported at ArcPad 6.

ArcPad 6 supports the shapefile spatial index of features. A spatial index results in significantly improved draw and search times. The spatial index is stored in two files (shapefile.SBN and shapefile.SBX) in the same directory as the associated shapefile. Spatial indexes are created in ArcView 3.x or ArcGIS Desktop.

ArcPad 6 adds support for island or donut polygons contained in shapefiles. ArcPad supports the following tools for donut polygons:

- Draw
- Symbolization
- Identify

- Find
- Measure
- Editing of attributes

ArcPad 6 does not support the ability to create new donut polygons, add or delete parts, or modify the geometry.

Support for the following projections is added at ArcPad 6.

- Albers
- Stereographic
- Double_stereographic
- Military Grid Reference System (MGRS)

Support for additional datums and spheroids has also been added resulting in the support for the majority of the national grids.

Display and Query

ArcPad 6 includes significant enhancements to map navigation, query, and display tools.

Map Navigation

- Support for spatial bookmarks. Bookmarks can be local (i.e., saved with the ArcPad map) or global.
- Pan and zoom to a specified coordinate or map extent.
- More options to select destination features for basic GPS navigation in addition to the Find method available at ArcPad 5.x.

Query

The Find tool is enhanced with the following:

- Additional search operators for string and numeric fields
- String searches using a "contains" operator
- Numeric and date fields support specifying a maximum and minimum
- Ability to restrict the search to the current map view

The Measure tool is enhanced with

- The addition of a Radial Measure tool
- Support for "point mode" measurements

Display

ArcPad 6 adds display and symbolization support for

- Graduated symbols and colors
- Simple labeling of lines and polygons
- Angled label text
- Raster symbols and fills
- Rotatable symbols
- An optional scale bar

- Editing and Capturing Data**
- Add, delete, and move vertices for lines and polygons.
 - Append vertices to existing line features.
 - Support for point mode digitizing with a pen or GPS input.
 - Support for capturing GPS points while in the process of capturing a line or polygon with the GPS (nested points).
- GPS Support**
- GPS support at ArcPad 6 is significantly improved through extended GPS receiver support and new GPS data capture tools.
- Supported GPS Receivers**
- GPS support for basic navigation and GPS data capture at ArcPad 6 is extended worldwide to all receivers that support any of the following GPS protocols:
- National Maritime Electronics Association (NMEA)
 - TSIP (Trimble's binary protocol)
 - DeLorme Earthmate binary protocol
- GPS Data Capture**
- Support for point mode digitizing (i.e., the ability to capture explicit points as opposed to stream mode digitizing)
 - Support for position averaging when capturing a point feature and a vertex for a polyline or polygon feature
 - Ability to pause the capturing of GPS line or polygon features and resume capturing at a later stage
 - Option to set the maximum thresholds for error messages such as position dilution of precision (PDOP) and estimated position error (EPE)
 - Option to activate an alarm when the GPS mode changes (two-dimensional, three-dimensional, and differential GPS) and automatically stop GPS data capture
 - Ability to specify minimum time intervals between GPS positions used for data capture of vertices
- ArcPad Tools for ArcGIS Desktop**
- The ArcPad tools for ArcGIS Desktop are new to ArcPad 6. The ArcPad tools for the ArcGIS custom toolbar include tools for
- Preparing data for use in ArcPad
 - Exporting ArcGIS Desktop layer symbology into ArcPad layer files (APL)
 - Creating ArcPad map files (APM)
 - Packing shapefiles

**ArcPad Tools for
ArcView 3.x**

The ArcPad tools for ArcView 3.x are updated to output the new files introduced at ArcPad 6, that is, the ArcPad layer file (APL) and the ArcPad map file (APM). The ArcPad tools for ArcView 3.x no longer output the ArcPad 5.x files (e.g., APF, APS, SPI, and APP). These files are not supported at ArcPad 6.

At ArcPad 5.x, the ArcPad tools for the ArcView 3.x extension include tools for creating custom input forms. These form creation tools are not included in the ArcPad tools for ArcView 3.x extension at ArcPad 6. Alternatively, the custom input forms are created using ArcPad Studio, which is included with ArcPad Application Builder 6.

**Internationalization
and Localization**

ArcPad 6 is fully internationalized for all the code sets and languages supported by the Windows CE operating system. These include Western and Eastern European languages as well as multibyte languages such as Japanese and Chinese.

Localized versions of ArcPad 6 will be available for download from the ESRI Web site at www.esri.com/arcpad as soon as each language version becomes available. Initially the localized languages will include Japanese, French, Italian, German, Spanish, and simplified Chinese. The languages will be available as Dynamic Link Library (DLL) files. ArcPad will load the language DLL on start-up if the DLL exists in the required folder.

***Using ArcPad*
Documentation**

The *Using ArcPad* documentation is significantly enhanced at release 6. Users will find that the new manual provides an in-depth look at using ArcPad. *Using ArcPad* is more than 400 pages of concise, step-by-step descriptions of how to complete specific tasks in ArcPad. It includes detailed information about ArcPad, Windows CE, and using GPS receivers and is an essential learning guide for the ArcPad user.

Following is a list of the chapters for the new *Using ArcPad* documentation.

1. Welcome to ArcPad
 2. Introduction to Windows CE
 3. Quick-start tutorial
 4. ArcPad basics
 5. Creating maps
 6. Managing layers
 7. Symbolizing your data
 8. Querying your data
 9. Connecting your GPS receiver
 10. Using the GPS Position Window
 11. Navigating with your GPS
 12. Editing basics
 13. Creating new features
 14. Editing existing features
 15. ArcPad tools for ArcGIS Desktop
 16. ArcPad tools for ArcView 3.x
- Appendix A: Reference
Appendix B: Customizing ArcPad
Glossary

More Information

Visit www.esri.com/arcpad for the latest information on ArcPad.