



The following was presented at DMT'11
(May 22-25, 2011).

The contents are provisional and will be
superseded by a paper in the
DMT'11 Proceedings.

See also earlier Proceedings (1997-2010)
<http://ngmdb.usgs.gov/info/dmt/>

Using the Magellan MobileMapper™ 6 with ArcPad™ 10 in the Field

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Presented at the Digital Mapping Techniques '11 Workshop hosted by DMME and USGS, Williamsburg, Virginia, May 22 to 25, 2011

Try it
out
now!

INTRODUCTION: The following is based on limited experience (one field season). Two units are available for demonstration at the conference.

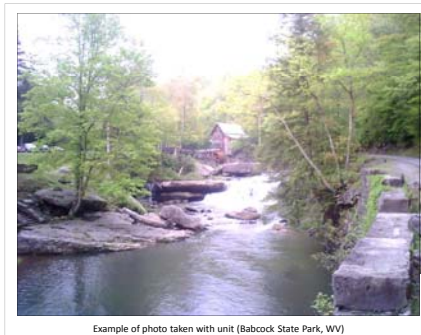
HARDWARE

Specifics, Pros, and Cons of the MobileMapper 6 Unit

- Size and Weight: 2.5 in (~6 cm) wide, 6 in (~15 cm) long, 1 in (2.5 cm), weighs 7.9 oz. (224 g)
- Ashtech (formerly Magellan Pro) MobileMapper 10 (newer unit) is \$1,200; add \$440 if bundled with ArcPad 10 (online prices as of May 18, 2011 without taxes or shipping)
- Uses Windows Mobile operating system, Microsoft™ Office included
- Runs on 2 AA batteries (rechargeables last 2 to 6 hours depending on layers open)
- 2 Mpx camera is adequate for scenery, but may not provide enough detail (see photos below)
- Different models available; WVGES uses the now-outdated Model 6 (less \$\$)
- Differential correction program available for additional cost (up to \$500)
- Optional Magellan mapping software (additional cost, not tested by WVGES)
- Capable of running ArcPad (additional cost ~\$440 if bundled with unit)

Pros:

- External antenna (optional, ~\$30 online)
- Relatively small (but so is the screen)
- Can be kept in case, if not on belt, and stay locked on satellites
- SD card (optional, 8 GB in WVGES units)
- Runs ArcPad



Example of photo taken with unit (Babcock State Park, WV)



Example of close-up photo taken with unit



Cons:

- GPS initially slow to lock onto satellites (but stays locked if unit kept up or out)
- Is not always recognized by computer when connected (may have to reboot computer)
- Doesn't hold time and date in memory for very long after switched off
- Need to set "Sync" settings or it will sync with Outlook during every desktop connection
- On-board memory could be larger
- Stylus is small
- Reportedly does not work well with Windows 7

SOFTWARE

Specifics, Pros, and Cons of ArcPad 10

- Currently running Version 10.0 SP1 (Build 26)
- ArcPad 10 appears to be more stable than ArcPad 8

Pros:

- Field data can be used in ArcGIS by copying and pasting files (see cons below)
- Can make forms (not tried yet)

Cons:

- "Low Memory Error" occurs often, which necessitates closing and re-opening Arc, and then re-acquiring satellites
- Data check-in and check-out is error prone and cumbersome (also unnecessary)
- Doesn't easily place geotagged photos in ArcMap
- Memory card error occurs fairly often
- Sometimes receive projection errors; editing sometimes locks up
- Tracks use a lot of memory causing low memory error
- Relatively steep ArcPad learning curve; ArcPad is not ArcMap

Wishes:

- Automatic sequential numbering of station IDs
- Automatic GPS Tracks with less memory use



Example of photo taken with unit (does better in lower light)

TIPS, TRICKS, AND FINAL THOUGHTS:

- A screen protector is recommended and used by WVGES, even though it decreases screen brightness
- Unless versioning is important, checking Arc data in and out is not necessary and can be prone to error
- Turn the GPS on only in ArcPad, otherwise ArcPad will not recognize it
- As usual, always test that shapefiles transferred correctly and are usable *before* going into the field.