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The contents are provisional and will be superseded by a paper in the DMT’11 Proceedings.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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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
- 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- Different models available; WVGES uses the now-outdated Model 6 (less $5)
- 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

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

Example of close-up photo taken with unit

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

Example of photo taken with unit (also in lower light)

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

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.