

**AASHTO Technology Implementation Group
Nomination of Technology Ready for Implementation
2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005**

Sponsoring DOT	1. Sponsoring DOT (State): Utah			
Primary Technical Contact	2. Name: Michelle A. Page			
	Organization: Utah Department of Transportation			
	Address: 4501 South 2700 West			
	City: Salt Lake City	State: UT	Zip Code: 84114-8410	
	E-mail: michellepage@utah.gov	Phone: (801) 965-4333	Fax: (801) 965-4564	
Technology Description	3. Name of Technology: Construction Field Books			
	4. Briefly describe the technology. Currently the Utah Department of Transportation (UDOT) uses palm held devices (PDAs; HP iPAQs) to synchronize construction field data with a central database (Oracle). This data consists of field notes that include but are not limited to type/quantity of equipment used on the job site, daily weather, job quantities placed to date, and journal entries. An additional benefit to this technology is the ability to use PDAs with digital cameras so actual photos can be inserted right in the journal entries for each project.			
	5. Briefly describe the history of its development. A method for eliminating traditional spiral bound field books was investigated in 2000. The initial requirements were for a portable electronic device that could be synchronized daily with the department's central database where all project information can be accessed by multiple parties (resident engineer, project manager, etc.).			
State of Development	6. For how long and in approximately how many applications has your organization used this technology? In 2001, UDOT began implementing the current system by buying several PDAs for use by interested field personnel. Once some of the kinks were worked out of the synchronizing process more PDAs were bought. By 2003, UDOT had fully implemented this technology and has been using it since.			
	7. What additional development is necessary to enable routine deployment of the technology? UDOT is always working on improvement for the Windows CE application; trying to find ways in which to do more with it. Currently, UDOT is working to synchronize PDAs via cell phone technology versus office downloads. The office downloads took nearly 10 minutes with the first models of PDAs and have been reduced to less than 1 minute with the current models. In addition, UDOT is evaluating the use of laptops versus PDAs where as built drawings could be completed in the field as work is completed.			
	8. Have other organizations used this technology? If so, please list organization names and contacts.			
	Organization	Name	Phone	E-mail
	Exevision	Robert Millet	801-359-3550	rmillet@exevision.com
	South Dakota DOT			
Texas DOT				
Wyoming DOT	Ken Spear	307-777-4150	ken.spear@dot.state.wy.us	
City of Austin Texas	Rob Watson	512-974-7019	robert.watson@ci.austin.tx.us	
Potential for Payoff	9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies. Time savings – with manual entry of the field books, someone in the office had to read through the books, interpret handwriting and sketches as well as transpose the data into electronic format. In addition, multiple forms needed completing so the data entry was for several file types as well as data entry into the project payment system. By having multiple accesses to view documents as well as the ease of digital transfer contractors have seen an increase in timely payments.			

**AASHTO Technology Implementation Group
Nomination of Technology Ready for Implementation
2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005**

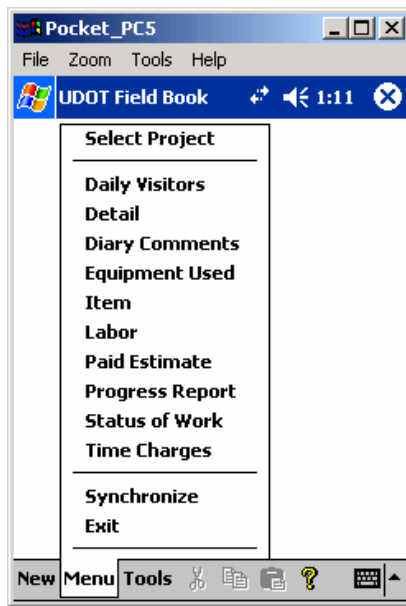
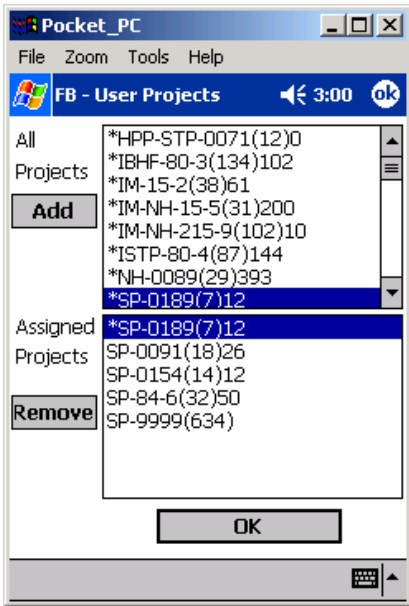
Implementation Potential	10. Please describe what actions another transportation agency would need to take to adopt this technology. 1) Look at current business requirements. 2) Setup database for incoming information to populate. 3) Look at a portable device to download to/from. 4) Identify synchronization application. 5) Provide training (on-going effort with new hires/seasonal employees).
	11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency? Estimated Cost: Initial software/application costs (\$) as well as the price for the selected PDA which is typically between \$500-\$600 once all the accessories are purchased. In addition there are ongoing costs to stay current. Effort: UDOT's current system requires ½ a programmer's time to provide support for all the field personnel using the devices. Length of Time: Couple of months for training and implementation.
	12. What organization(s) currently supply and provide technical support for this technology? Any PDA supplier (UDOT uses HP-iPAQs for the Windows CE interface) and uses in house technical support for the devices.
	13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation. Resistance to change was the primary issue affecting the ease of implementation. Another concern addressed through this effort were digital versus hardcopy; an archiving system was developed that backed up the devices a couple times a week.
Willingness to Champion	14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Date Submitted	15. Date: September 8, 2005

16. Please include image(s) of sketches or photographs, if available Image(s) are attached.*
(Screen captures of the applications are attached.)

*

AASHTO CONTACT	MARTY VITALE ADMINISTRATIVE COORDINATOR FOR ENGINEERING AASHTO	PHONE: 202.624.5862 FAX: 202.624.5469 mvitale@ashto.org
-----------------------	----------------------------------------------------------------------	------------------------------------------------------------------------------------------------------

AASHTO Technology Implementation Group
 Nomination of Technology Ready for Implementation
 2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005



AASHTO Technology Implementation Group
Nomination of Technology Ready for Implementation
2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005

Pocket_PC
File Zoom Tools Help

FB - Equipment Used 11:59

SP-9999(634) bbailey ?

Date 03/20/2003

Contr/Sub HIDDEN PEAK ELECTRIC C

Equipment	Number	
	O	S
Auger Truck	1	0
Backhoe	1	0
End Dump	1	0
Pickup	2	0
Trencher	0	1

Prev Next

Pocket_PC
File Zoom Tools Help

FB - Labor 1:59

SP-9999(634) bbailey ?

Date 03/20/2003

Contr/Sub HIDDEN PEAK ELECTRIC CC

Worker Type	Number
Super	2
Skilled	4
Unskilled	1
Total	7

Save Delete Cancel

Pocket_PC
File Zoom Tools Help

FB - Detail 2:30

SP-9999(634) bbailey ?

Detail
10 - ROADWAY

Description

Total Bid Amt. \$186,323.05

Items
Prev Next

Pocket_PC
File Zoom Tools Help

FB - Select Item 8:12

SP-0091(18)26 bbailey ?

Select Item

- 1 Mobilization
- 2 Public Information Services
- 3 Traffic Control
- 4 Survey
- 5 Reconstruct Manhole
- 6 Remove Concrete Sidewalk
- 7 Remove Concrete Driveway
- 8 Remove Concrete Curb and Gutter
- 9 Roadway Excavation (Plan Quantity
- 10 Asphalt Pavement Sawing
- 11 Untreated Base Course 3/4 inch d

Display Item

Pocket_PC
File Zoom Tools Help

FB - Item Summary 8:18

SP-0091(18)26 bbailey ?

Item	1	Spec	012850010
Mobilization			
Qty	1.0000	Unit	lump sum
Unit Price	\$25,000.00		
Total	\$25,000.00		
Placed Qty	1.0000	%	100.00
Placed Tot	\$25,000.00		

Stationing	Comment
Placement	Prev Next

Pocket_PC5
File Zoom Tools Help

FB - Item Comment 2:40

SP-0091(18)26 bbailey ?

3 Traffic Control

Comment Date 10/30/2003

Entry User bbailey Comment # 1

7:00 am - Inspected traffic control.
7:20 am - Notified Contractor to install additional barricades at beginning of project.
8:00 am - Contractor completed installation of additional barricades.
5:00 pm - Traffic control incompliance.

Add Delete Prev Next

AASHTO Technology Implementation Group
 Nomination of Technology Ready for Implementation
 2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005

Pocket_PC
 File Zoom Tools Help
 FB - Item Summary 11:13

SP-0091(18)26 bbailey ?

Item	6	Spec	022220005
Remove Concrete Sidewalk			
Qty	55.0000	Unit	square
Unit Price	\$15.00		
Total	\$825.00		
Placed Qty	20.4000	%	37.09
Placed Tot	\$306.00		

Stationing	Comment
Placement	Prev Next

Pocket_PC
 File Zoom Tools Help
 FB - Select Station 11:31

SP-0091(18)26 bbailey ?

6 022220005 Remove Concrete

Orig	SR-91	490+72.00	LT.	491+36.60
Orig	SR-91	492+43.50	LT.	492+50.10
Orig	SR-91	492+94.00	LT.	493+04.00

Add Stationing Display Stationing

HP5150
 File Zoom Tools Help
 FB - Stationing 9:56

SP-0091(18)26 bbailey ?

Item	6	Spec	022220005
Est. Qty	55.0000	Placed Qty	
Line/Sheet	SR-91		
From Station	492+94.00		
From Offset	LT.		
To Station	493+04.00		
To Offset	LT.		
Info Only	No	Plan Qty	8,330
Station Comment			
Actual		Placed Qty	
Stationing Notes	Delete	Add	
Placement	Save	Prev	Next

Address <http://www.udot.utah.gov/index.php/m=c/tid=448>

Subtopics

Quick Links

- Transportation Links
- Public Meetings
- Public Transit
- Vehicle Licensing
- Driver's License
- Get Acrobat Reader
- Get Acrobat Reader for Pocket PC
- Get PowerPoint Viewer



PDBS Pocket PC Fieldbook Download Center

Download Listing

Field Book Application ([Open](#) | [Save](#))

2/02/04

Construction Safety & Health Manual ([Open](#) | [Save](#))

3/24/03

Construction Manual of Instruction ([Open](#) | [Save](#))

1/01/02

PDBS Field Book Training PowerPoint File ([Open](#) | [Save](#))

2/09/04

Click Open to run the presentation in your browser or Save to Download the PowerPoint presentation to your computer. If you do not have PowerPoint to run the presentation you can download the PowerPoint viewer program at left in the Quick Links area and install to your computer.