# Penn State IT students go "virtually nuts" over DB2 Everyplace.

*Howard Miller, Palm Pilot specialist, shows Penn State Mont Alto students and staff how the IBM DB2 Everyplace solution works on the Palm Pilot.*

## Overview

- ***Application***
  *Online store developed by university class on mobile computing*
- ***Business Benefits***
  *Ease of development and use; relevant training in leading-edge technology; expert guidance from IBM technical staff*
- ***Software***
  *IBM DB2® Everyplace™; IBM DB2 Universal Database™*

Dr. Stan Aungst is an unabashed, card-carrying technology devotee. As program coordinator for the Associate Degree Program at the School of Information Sciences and Technology (IST) at Penn State's Mont Alto Campus, Aungst is always on the lookout for opportunities to give his students hands-on experience with leading-edge technology. Through its Scholars Program, IBM looks to provide just such opportunities, donating software and expertise to universities—Penn State among them—wanting to train their students in emerging technologies. Last year, the goals of Aungst and IBM converged when Steve Kellogg, director of Advanced Information Technology at the Penn State Center for Academic Computing (CAC), invited the educator to attend a demonstration of IBM DB2 Everyplace, sponsored by the IBM Scholars Program and the IBM Center for Advanced Studies at the Toronto Lab.

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>
> *–Dr. Stan Aungst, Program Coordinator, Associate Degree Program (2IST), School of Information Sciences and Technology, Penn State Mont Alto*

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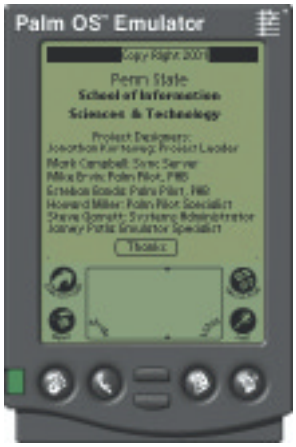


*Penn State Mont Alto students created Virtual Coconuts, an online store, using IBM DB2 Everyplace as the mobile database and IBM DB2 Universal Database on a backend server.*

"Penn State prides itself on staying at the forefront of technology, so I was eager to learn about IBM's advances in mobile computing," recalls Aungst. "I could hardly contain myself when I realized that DB2 Everyplace was both innovative and user-friendly—just right for my students to apply in a project." He took his notion, and his enthusiasm, back to his campus, where about 40 students are enrolled in a two-year associate degree program in information sciences and technology. An upcoming class luau sparked one student's idea for a virtual store with Hawaiian accessories, and his classmates took the ball and ran with it.

"Our technology students used Palm Pilots and DB2 Everyplace to create their Virtual Coconuts solution, which sells Hawaiian shirts, grass skirts and papier-mâché coconuts for the class luau," explains Aungst. "The fact that second-year college students can use leading-edge technology to build a sophisticated mobile computing solution has everyone here very excited about DB2 Everyplace."

**Practical schooling in mobile computing technology**

Virtual Coconuts allows students to set up an online password account, order products and check the status of their orders using Palm Pilots. The students built a two-tier solution with IBM DB2 Everyplace Sync Server and IBM DB2 Universal Database running together on an Intel® Pentium® III PC and synchronizing with the DB2 Everyplace database on the Palms. Different students handled separate stages of the project, such as creating the application using Mobile Application Builder and installing the Sync Server.

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"We were amazed that DB2 Everyplace was a full-function database, yet had a small footprint and ran on a handheld device," says Aungst. "And the Mobile Application Builder was fantastic—it led students through a point-and-click programming process and automatically created the C code for the Palm."

IBM developers were also on call to offer assistance. Says Aungst, "The IBM technical people were great when students e-mailed them with questions. They always knew exactly what was happening and pointed the students in the right direction. We're all grateful for IBM's support."

*The designers and builders of Virtual Coconuts (from left to right): Jamey Patla, Mark Campbell, Stan Aungst, Mike Ervin, Esteban Banda, Jonathan Korteweg, Howard Miller and Steve Garrett.*

**A wave of new functionality—featuring DB2 Everyplace**

In its next stage, Dr. Aungst's students will upgrade to DB2 Everyplace Version 7.2 to tackle integrating the Virtual Coconuts solution with an enterprise resource planning (ERP) system. They will adapt the mobile, front-end order-entry application and create a new backend inventory management and order fulfillment system. Dr. Aungst will also introduce cryptography into the solution to ensure secure data transmission. And, buoyed by the success of this project, he will use DB2 Everyplace to teach a group of advanced high school students in the Pennsylvania Governor's School for Information Technology at Penn State this summer.

"IBM has nurtured a close relationship with the CAC and IST at Penn State, to the students' benefit," notes Aungst.

"IBM's commitment to education melds very well with Penn State's focus on making education relevant for students, who will face a competitive work environment. Wherever our ideas take us—from wireless technology to supply chains to data security—IBM is there."

Penn State and IBM would like to extend their acknowledgements to the following students and staff behind Virtual Coconuts: Esteban Banda, application programmer; Mark Campbell, DBA; Mike Ervin, application programmer; Steve Garrett, systems administrator; Howard Miller, Palm Pilot specialist; Jamey Patla, emulator specialist; and Jonathan Korteweg, project manager. Guiding these students were: Paul Zikopoulos, IBM database specialist; Craig Anthony, CAC DBA; Steven Kellogg, manager of the CAC; Jay Pederson, IBM product manager for mobile data management; Nimesh Bhatia, IBM development center software enginner; Dr. Fred Loomis, director of IST Solutions Institute; Bev Vagnerini, manager of Network and Information Systems; Sally Carbaugh, computer specialist and the entire computing staff at Penn State Mont Alto. Penn State also wishes to thank Palm Inc. for use of its emulation program and screen shots.

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