



**US Army Corps
of Engineers**
Engineer Research and
Development Center

PCASE (Pavement-Transportation Computer Assisted Structural Engineering) Software

Technology

PCASE is a software program that incorporates all criteria in the area of transportation into a user-friendly computer format for designing and evaluating transportation systems. The system allows research to be modularized into a set of scalable and reusable software components, which are then combined to create a software desktop system designed for a single computer, or for posting to an Internet server for worldwide access.

PCASE Windows-based computer programs include rigid and flexible airfield design by conventional and layered elastic methodologies, rigid and flexible road design, as well as railroad design and evaluation.

Problem

Field structural engineers must spend valuable hours collecting information from many sources to make engineering decisions based on the most up-to-date engineering findings from around the world.

Expected Cost To Implement

PCASE software is available to the public at no charge. All that is required to get started is a Microsoft Windows-based PC, with the following recommended specifications:

Computer Hardware/Software	Minimum	Recommended
Processor	300 MHZ	1 GHZ
Video card	Standard VGA	16 MB graphics card
CD-ROM	12x speed	40x speed
Monitor resolution	1024 x 768	1024 x 768
Memory	64 MB	256 MB
Sound card	Any	Any
Microsoft Office	2000	2000 or higher
Monitor size	15 in.	21 in. or higher

Benefits/Savings

By incorporating recent enhancements in information technology (Internet, personal computers, etc.), PCASE allows technology transfer at far less cost and with wider distribution than available in the past. The PCASE team at the ERDC Geotechnical and Structures Laboratory developed the system to allow research to be modularized into a set of scalable and reusable software components. These components are then combined to create a software desktop system designed for a single computer, or for posting to an Internet server for worldwide access, without duplication of effort or additional costs.

As a Tri-Service Army/Navy/Air Force effort, the software is useful to all branches of the military services and to private sector engineering firms worldwide. Once PCASE programs are approved by the PCASE committee, notification is made via the PCASE e-mail user's list. To join the PCASE user's list, or to download the latest versions of all PCASE programs, individuals can access the Project's Web site, <http://www.pcase.com>.

Status

The next release of PCASE, version 2.0, which is currently available for official beta testing, has multiple enhancements, including the addition of layered elastic technology, as well as a new vehicle editor that allows users to "build" their own vehicle for use in their pavement design or evaluation. To apply to become a beta tester, visit <http://www.pcase.com/betatesting>.

ERDC POC

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Distribution Sources

The software is available to the public via download and to Department of Defense personnel via download or CD. To subscribe, send an e-mail request to software@pcase.com.

Available Training

No training is necessary to use PCASE software. Communication among PCASE users is encouraged by participation in the PCASE Chat Room (<http://www.pcase.com/chat.html>) and Message Board (<http://www.pcase.com/wwwboard/wwwboard.html>).

Available Support

Fixes for user-reported problems are posted to the PCASE Support Page (<http://www.pcase.com/support.htm>). The Support Center can be contacted directly by e-mail to software@pcase.com.