PCASE (Pavement-Transportation Computer Assisted Structural Engineering) Program

US Army Corps of Engineers ®

Engineer Research and Development Center

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 pavement 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. Minimum and recommended enhanced system specifications are as follows:

- Processor: [minimum] 300 MHZ, [recommended] 2.8 GHZ

- Video card: [minimum] Standard VGA, [recommended] 16 MB graphics card

- CD-ROM: [minimum] 12x speed, [recommended] 40 x speed

- Monitor resolution: [minimum] 1024 x 768, [recommended] 1024 x 768

- Memory: [minimum] 512 MB, [recommended] 1 GB

- Sound card: Any

- Microsoft Office: [minimum] 2000, [recommended] 2000 or higher

- Monitor size: [minimum] 17 in., [recommended] 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 users list. To join the PCASE users list, or to download the latest versions of all PCASE programs, individuals can access the Project's Web site.

Status	The current version of PCASE (version 2.09) has multiple enhancements, including the addition of layered elastic technology, as well as a new vehicle editor that allows the user to "build" his own vehicle for use in his pavement design or evaluation.

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Distribution Sources	Information on downloading PCASE software can be reached at commercial phone 601-634-2145. To subscribe, send an e-mail request to Robert Walker at the above email address.
Available Documentation	The PCASE Users' manual is available for downloading at the PCASE Web site.
Available Training	Workshops are available for PCASE training in your area. To see a list of PCASE workshops, visit the PCASE training page. Also, computer-based training is available through the PCASE CBT training link.
Available Support	The Support Center can be contacted directly by e-mail.