



USACE CADD NEWSLETTER



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CADD Newsletter

This unofficial newsletter, is authorized under the provisions of AR 25-30, and is intended to keep all Corps personnel who are involved in the use and management of CADD informed of CADD related issues throughout the Corps as well as HQUSACE changes and initiatives which will affect the Engineering business process. The Newsletter will be issued electronically on a quarterly basis. Articles on CADD issues with a broad area of interest are solicited from the field. Send all submissions and/or comments to jean.a.mcgin@usace.army.mil.

CADD/GIS Symposium 2000

Next year's CADD/GIS Symposium will be held in San Antonio, TX, 19 – 22 August. The Symposium and the Air Force's Pollution Prevention (P2) Conference will be co-located at the San Antonio Convention Center. Current plans are for there to be a registration fee of \$250. The proposed theme for the Symposium is "The Web." Now is a good time to start thinking about technical presentations for the Symposium. Shortly after the first of the calendar year there will be a call for abstracts on presentations. We would like for this to be the best Symposium we have ever sponsored, and we will need good technical presentations on CADD issues/advancements. We will need those working with CADD to develop the presentations. There will be several free booths available for Government Agencies. Start thinking about something you can put together for a booth to showcase what the Corps is doing with this technology. Also, start planning to attend the Symposium as one of your training options for the year.

Cost Engineering Field Action CADD (FAC) Group

The over-arching goal of the CFAC is to integrate Cost Engineering with Computer Aided Design and Drafting (CADD) to enable cost engineers to work in the CADD environment. The USACE perspective is to use CADD technology intelligently to provide optimum products and services to our customers, delivering completed projects "better, faster, and cheaper". Working from this perspective, the goal is to execute all Corps of Engineers design, engineering, and construction missions using various state-of-the-art CADD systems and one industry-wide, National CADD standard.

Those are abbreviated statements for the CFAC group and CADD technology. What these statements don't discuss is that the cost estimating future is changing dramatically. Lost positions over past years demand that we accomplish our tasks

"better, faster, and cheaper". Corps Cost Engineering will be challenged to address industry CADD standards in our existing standard cost databases.

The last giant leap in engineering design was the implementation of CADD and GIS. Currently and historically two-dimensional paper and raster drawings are the standard product of design. However, Design is moving to 3D utilizing intelligent objects. These intelligent objects "know" what they are, how they fit into the design, and their cost. The future challenge is the integration of intelligent object design with cost estimating. Several commercial CADD (3D) design programs generate quantity and cost data directly as the design is created and export this information to compatible estimating software.

Changes within the Corps' Cost Engineering activities will be equally dramatic. With the advent of M32 (no official name yet) we can put to rest our old Micro Computer Aided Cost Estimating System (MCACES) DOS based Gold 530. The ability to associate CADD information to "M32" line items and assemblies will soon follow. How that association will develop is Cost Engineering's new challenge.

Imagine a Cost Engineering office totally paperless, files and documents stored electronically, quantity take-off from electronic drawings (CADD or raster), and all information shared through your PC. This is not imaginary for Mr. Steve Kemp, Chief Military Estimating Section, Omaha District. His office is progressing rapidly to fully implement this paradigm.

The CFAC FY01 project, Evaluate Quantity Takeoff for CADD-COST Software Integration, is nearing completion. We anticipate the project results to be released through the WES Technology Center early in FY02. Next year (FY02) the group will focus on a Corps wide implementation of electronic quantity take-off. We have been encouraged to work with and through each MCACES point of contact (POC) at each District and are looking forward to each MCACES POC to champion implementing CADD Cost integration in each District. Remember, as Cost Engineers we identify dollars and sense out of designs.

For information regarding Cost / CADD contact any of the CFAC group members, or visit the Cost Eng Field Action (CFAC) at this web page; <http://cadd.wes.army.mil/> By Gareth Clausen, Walla Walla District

Development of a Structural Virtual Center of Expertise (VCX) Web Site

A Structural VCX web site is being developed at the CADD/GIS Technology Center, through contract. Development of this web site was submitted by the Structural FAC as a project for the Center FY02 Program, but was not approved. There were uncommitted funds in the SAC account, which were sent to the Center for use in the award of this contract. The Structural FAC developed the scope of work, which was submitted to the contractor, and they will participate in the oversight of the development of the web site.

Center Corporate Staff Meeting

: The CADD/GIS Technology Center Corporate Staff (CS) met 17-18 2001 at the Air Force Academy in Colorado Springs, CO. New members of the group from NIMA and GSA attended the meeting. The primary purpose of the meeting was to select projects for the FY02 program which were presented to the Board of Directors for approval at their September meeting. Presentations were made on the status of the FY01 projects, the Center's Portal strategy, the Balanced Scorecard working group progress, and the OSD Report on the Modernization of DoD's Real Property Information Systems. The Air Force provided a tour of the Air Force Academy, which was conducted by the Architect of the Academy.

Center Board of Directors Meeting

The Center Board of Directors (BOD) met in Alexandria, VA at the Humphrey Engineer Center, Kingman Building on 5 September. Board members or their representatives from USAF, USACE, USMC, NAVFAC, USCG, NIMA, GSA, ACSIM, and NASA attended. The EPA BOD member participated in the meeting by telephone. The proposed FY02 program for the Center was presented by the Corporate Staff and was approved by the BOD. Presentations were made on the Society of Military Engineers (SAME) Knowledge Management initiative, the NAVFAC/Center Knowledge Management web site, and the DoD Report on the Modernization of DoD Real Property Information Systems. Discussions followed each of the presentations. Signatures on the revised charter have been obtained for USACE, ACSIM, NAVFAC, USCG, NASA, USMC, USAF, and NIBS. The GSA member reported that the document is on their director's desk and should be signed within the next two weeks. The Center presented the information on the upcoming 2002 Symposium and Mr. Lyons, EPA, presented information on the arrangements he is making in Las Vegas for the 2004 Symposium. The Center chief gave a presentation on good news stories on the accomplishments of the Center in the last fiscal year. The next BOD meeting will be held 11 December in Las Vegas at the EPA facilities.

Center FY02 Program

The Center FY02 program as approved by the Board of Directors includes 12 newly

submitted projects (two of which are incorporated into the ongoing A/E/C CADD Standards project). Seven projects submitted by Corps FACs are included in those projects funded. The majority of Center FY02 projects are continuing efforts, i.e. the Spatial Data Standards and the A/E/C CADD Standards. The FAC submitted projects that were funded are:

- Improve A/E/C CADD Standard MicroStation Workspace User Interface (incorporated into A/E/C CADD Standards project)
- MicroStation File Manager Improvements (incorporated into A/E/C CADD Standards project)
- Structural Detail Library Addition (incorporated into Generic Detail Library Addition project)
- GeoRender Update
- Electronic Deliverable Guidance
- Web Based Standards and Workspace Training
- Architectural Web Site (incorporated into Center Internet and Intranet Technology project)

It is not too early to start thinking about what projects you would like to see included in the FY03 program. A call for projects will be sent out in the February/March time frame.

Spatial Data Standards Implementation Workshop

The next Spatial Data Standards (SDS) Implementation Workshop will be held at the CADD/GIS Technology Center, Army Engineer R&D Center, Vicksburg, Mississippi **5-7 February** 2002. For additional information, and to register for the workshop, go to the "Classes" area on the CADD/GIS Technology Center's Internet Web Site , <http://tsc.wes.army.mil> . The workshop provides both classroom and "hands-on" instruction concerning implementation of the SDS using commercially available GIS and relational database software. The "hands-on" instruction is based upon Intergraph GeoMedia & ESRI ArcView GIS software, and Microsoft Access database software.

GPS Tutorial

There is a GPS tutorial available on the Center Web site. It can be accessed from the Home Page by clicking on Events/Classes at the top of the page. It is worth checking out.

Call for Articles

All except one of the articles in this issue of the Newsletter were written by Jean McGinn, CECW-EE. I would encourage anyone in the field who has CADD related information of general interest to Corps personnel to submit articles (to my e-mail address) for the next issue, which should be issued the end of December 2001.
