

FOR IMMEDIATE RELEASE

SUBJECT:

Quality Software Solutions, Inc. licenses FairCom® c-tree Plus® for use in TimeClock

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Quality Software Solutions out of Chattanooga, Tennessee, announced the release of TimeClock V1.07. TimeClock is a computerized employee timekeeping system which automatically computes employee hours, overtime, sick pay and other aspects of personnel timekeeping.

With the next century only a few years away, public and business sectors are increasingly interested in insuring correct time calculations for the year 2000. The inherent problems of most date/time fields relating to that year are receiving thoughtful attention of those programmers whose work will affect day-to-day activities of businesses around the world.

"When we first started the development of TimeClock, portability was our number one concern. Also, obviously, time calculations are very important in our time and attendance package. Our initial plan was to store time and dates using the standard tm data structure." Fortunately, those plans were not realized.

Bryson explains. "In keeping with our shop policy of womb-to-tomb development in one environment before moving to another environment, in 1992 we developed TimeClock first in the MS-DOS environment before moving to XENIX, UNIX, or AIX. When we started the XENIX port, we discovered we were missing a critical time function (mktime). At that time we knew we would need to tool our own time functions because mktime was so critical to the storage, retrieval, and calculations of time." Bryson continues.

"We then took a close look at the tm structure and realized that there was a problem in the year field. What happens in the year 2000? We decided to design our own comparable tm structure making the year field the full year (i.e. 1996) instead of the year minus 1900 (i.e. 96). This made our date/time fields impervious to the year 2000 problem." Bryson explains. "Because FairCom's c-tree Plus allows any type of information to be stored in a record, the change was painless. This would not have been the case with a database product that requires their own field types. All we needed to do was determine the size of the new structure and store it in the record." adds Bryson.

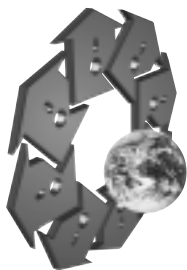
The TimeClock Version 1.07 is the first version with barcode/magnetic card interface, FairCom's r-tree reporting capability, and a custom menuing system.

"Because c-tree Plus is distributed in full source code, it's really flexible for applications where full control is necessary. This was important to Quality Software Solutions because they needed an open-ended field definition to incorporate these date questions. In addition, c-tree Plus was chosen for its

extreme portability and performance. I understand c-tree Plus directly supports over 30 platforms and has been ported to over 100. However, reliability was the main reason we selected c-tree Plus. During initial development I hand-tooled data base routines, but decided to remove them from TimeClock and buy c-tree Plus because FairCom has been doing this for so long, and for many different large companies. It didn't make good business sense to write my own. I have never wasted one second debugging c-tree Plus. I have lost countless hours debugging compiler bugs, operating system bugs, and cursing library bugs."

FairCom opened in 1979 and released its first true application development tool, the c-tree file handler in 1984. Today c-tree Plus© is running in over 100 CPU/OS environments in more than 98 countries worldwide. FairCom technology is incorporated into the products of companies like Hewlett-Packard, NCR, Cray, GTE, Apple, IBM and Great Plains Software. c-tree Plus sells for \$895 and is distributed in full C source code, no royalties and 26+ free development servers. It is licensed on a per programmer basis. For further information, contact FairCom US at (800) 234-8180, FairCom Europe at 35-773-464 or FairCom Japan at 81-0592-29-7504 or FairCom Brasil at 55-14-224-1610, or <http://www.faircom.com/>.

TimeClock is distributed for \$699 for unlimited users and all supported operating systems. For further information, contact Quality Software Solutions at (888) 423-5757 or sales@tclck.com.



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