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Date: January 28, 1994
Re: Kevin Bohacz

To whom it may concern,

As a Software Designer and as now as Lead Software Designer for Colortran, Inc. Research & Development, I have worked with Kevin Bohacz on our flagship product, the *Medallion*. This product is a high-end console for theatrical and television lighting control. It is a 486 based system, using OS/2 2.1 for User Interface, Memory Management, Device Control, and Multi-level Multi-tasking (that is, both multiple processes & and multiple threads within each process). The board currently supports 1536 channels mapped into 1536 dimmers, 8 physical faders, 128 submasters, local attached and network attached handheld controls (4 total), local attached graphics display, local & remote text display (10 total), graphics tablet inputs

Kevin has provided this project with the following:

- Initial discussions with lighting designers, system specifiers, and board operators to determine necessary features and relative importance of those features.
- Working with Marketing and Sales to develop a working spec, and to develop phases of console development.
- Analysis of the Medallion system, using Yourdin & Constatine techniques, selecting and purchasing a PC-based CASE tool to automate this process.
- Benchmarking of critical system functions, to determine CPU sizing.
- Designed the Medallion software, including breaking into sub-systems, breaking each sub-system into modules, and specifying connections between sub-systems & modules.
- Planning software resources and schedules.
- Complete design/code/test of the sub-system we know as the User Command Processor. This command processor provides key entry parsing, with context sensitive prompting, management of programmable key LCD labels (which are themselves changed depending on which command and parameter are entered). This process also starts a second and third instance of itself which handle the local and networked hand-held devices (optionally, can be viewed from PM Graphics Display as well). The command processor also supports creation and usage of pre-parsed Macros, as well as "key-macros". The command processor also supports keeping a separate current command line and command history for each major function of the system, and allows switching between these functions even with incomplete command lines, restoring command lines properly. Additionally, the command

processor accepts input from a "digitizing tablet" (this use in a lighting console is patented by Colortran); this "Magic Sheet" allows operators an alternative to keyboard input, and allows "point-and-click" capability to graphic representations of the physical stage, usually through a "light-plot" (a means that designers use to configure lighting fixtures for stage and TV).

- The Show Editor subsystem was also designed/coded/tested almost entirely by Kevin. This process edits all parts of the console database, including Cue Fades (can be edited one at a time, or in a spreadsheet-like fashion), Cue Attributes (UpTime, Down Time, Delay Time, Follow Time, Link, Return, and more), Special Effects, Submasters (which can also be configured as a Cue Fade or Effect), Groups, Autogroups, Patch (both "by Channel" and "by Dimmer", and including Parked dimmers, proportional patch, profile, non-dim attribute and patch), Macro names, and Set-up.
- The balance of the system on this processor consists of two sub-systems, the Show Runner and the Director. These were coded mostly by me and another software designer, but the architecture was put in place by Analysis and System design originally done by Kevin, in particular the "Job Transaction Processor" which was designed strictly to his spec and was used in both of these subsystems. Also, under schedule pressure to get to a trade show, Kevin added in code to pass Hand-Held data back and forth to custom hardware manipulated by the Show Runner.

The delivered "C" code on this project is more than 7.5 MB, and Kevin's contribution was more than 70% of this. This product would be much different, and much less were it not for his work.

Kevin has always been conscientious, considerate, and stimulating to work with. He brings a "big vision" to his work, in that he plans for the future, and writes code defensively to avoid accidental breakage by maintenance changes. His code is well commented, and is self-explanatory. He will aggressively, relentlessly tackle problems, and has found work-arounds to Operating System problems and compiler problems. He has become quite proficient as an OS/2 programmer and user, and has a tremendous fluency in "C".



Bob Whitten
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Colortran, Inc. R&D