



Vancouver, November 21, 1997

Letter of reference

Christopher Graae has been employed at our product development facility in Vancouver, Canada as an engineering trainee from June 9th to November 21st 1997. During this time Mr. Graae has been working with three other project members developing four different Intel Pentium MMX and AMD K6 microprocessor upgrade modules for IBM ThinkPad computers.

The scope of the project has been to create complete mechanical and electrical specifications, design schematics, PCB layouts and to test and troubleshoot the resulting engineering prototypes. During the course of the project, the following industry-standard software was used in a Microsoft Windows NT networking environment:

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| OrCad | - CAD software for schematic design and electrical characterization. |
| Protel | - CAD software for PCB layout and design |
| Excel | - Databases / BOM lists |

Electrical characterization was accomplished by 'reverse engineering' existing CPU modules, using techniques devised largely by Mr. Graae and his colleagues. The resulting CAD drawings and files were delivered in person by Mr. Graae to our manufacturing contractor in Corvallis, Oregon for final adjustment in conjunction with their production personel. The level of complexity of the project was quite high, using TCP and BGA processor packages, and high-interconnect multi-layer PCB boards.

Mr. Graae has been involved in all aspects of the project, from initial specification to the successful testing and troubleshooting of the initial engineering samples, and has been a valuable member of our development team. In addition to the design project, Mr. Graae has assisted in our production work, including disassembly, repair and troubleshooting of notebook computers and SMT-soldering and rework. Mr. Graae has performed his duties to the highest standards and I can recommend him without hesitation to prospective employers.

Platinum Upgrades Inc.,

Andrew Gitt