

Collection, Organization, and Summarization of Facts Surrounding the History of Graphics Hardware

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1 Introduction

Computer graphics hardware is a maturing field despite the exciting advances that continue to be released as products or described at conferences such as High Performance Graphics. Somewhat surprisingly, there is not yet a comprehensive historical record of the field, especially the technological side of the business. There are a scattering of academic articles, numerous deep-but-narrow enthusiast sites for specific machines or companies, difficult-to-track-down advertising materials and specification sheets published by the companies, and reviews and analysis in contemporaneous commercial periodicals. With the exceptions of the tables on Wikipedia, many of these sources do not rigorously cite each and every fact.

2 Goal

The primary goal of this project is to create a publicly available database of facts regarding all computer graphic hardware designed or sold. These include specifications, dates, prices and any publicly available information regarding the architecture and implementations of the products. Secondly, with the information that we have collected we will write detailed corporate profiles and technical articles about the products. Every fact will be supported by a specific citation, permitting the use of this data set by academic publications. The data will be organized and presented publicly on the Internet in a search-able format that will support future analysis and research into the history of the field.

3 Our Approach

We have already created a database that contains many companies and the products they made. For each company there is a history of major corporate events such as incorporation, products made, mergers and bankruptcies. The database is in the form of a publicly-viewable wiki in which people can suggest changes by email or request an account to edit the wiki. We made a visual timeline that contains all the companies in our database. Additionally, we have begun creating detailed corporate profiles that describe the market goals and history of each company, as well as their market successes and failures. Finally, we have also worked on developing a technical analysis of the individual products including architectural, performance and marketing information.

4 Future Work

In the short term this database will be used to provide reliable and continually updated charts and tables of performance metrics, often desired by authors of scientific papers. (For example, memory bandwidth versus year for PC card GPUs across brands with statistically justifiable regressions.) In the long term, this basic data will provide us and other researchers a firm basis on which to build a rigorous academic historical study of the field. As we find gaps in the available literature, we will conduct interviews with the engineers and managers involved with the companies and products within the appropriate time frame of the missing information.

5 At The Conference

Two posters will be presented. The first will contain an explanation of the project and how people can contribute information, ideas and materials. The second will show the corporate timeline, according to the facts currently in our database. Attendees will be encouraged to verify the facts for the companies they are familiar with personally and corrections will be recorded. Cards and flyers will also be handed out with contact information to facilitate longer-term contributions and working relationships.

6 How You Can Contribute

In our research, we have found that for some companies there is a dearth of technical and marketing information currently available. This is especially the case for smaller private companies that were not required to submit substantial filings with regulators, did not release their products or have for whom all useful information has since been removed as old web-sites have been taken down. If you were associated with any of the graphics hardware companies that appear on our wiki index, or were a part of a graphics hardware company that does not appear in our collection, please consider sending us any suggestions or corrections to improve the accuracy of our work. You may also request an account and become a contributor to our online wiki, actively correcting the information we have posted, providing useful and accurate citations or resources that we may have missed or do not have access to, and even writing historical and technical articles for companies and/or their products.