Rapid Prototyping: State of the Industry

1994-1995 Worldwide Progress Report
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1994 was a pivotal year for the rapid prototyping (RP) industry -- and it was the most progressive year in its history. More systems were sold in '94 than were sold in '92 and '93 combined. Many user companies purchased second and third systems, and a few companies now have as many as a dozen. Tens of thousands of RP jobs were processed last year -- more than ever before. Service providers also experienced a banner year, with record revenues and growth. After-market products and services began popping up regularly, a sure indication that RP is indeed an industry to watch.

The picture is not entirely rosy. Some system manufacturers fail to offer RP products at price/performance levels that CAD/CAM users have come to expect. Others consume valuable company resources as they fight to protect their intellectual property. Meanwhile, the industry is beginning to consolidate and mature as RP becomes a critical part of everyday business at many companies, particularly in the U.S.

Market Expansion: Unprecedented growth in revenues and unit sales is the big news of 1994. Revenue estimates from product sales and services grew by a whopping 99.7% in '94, making RP an estimated $198 million industry. If you add in the secondary tooling and duplicate parts that come as a result of RP, the industry mushrooms to an estimated $280 million, conservatively.

Unit sales grew by a portentous 84%, from 183 units sold in '93 to 336 sold in '94. In the first quarter of '95, the installed base of RP systems surpassed the 1,000 unit milestone.

Product sales: For most U.S. vendors, sales are on the rise. 3D Systems led the pack in 1994 with 94 systems sold, followed by Helisys which sold 76 systems. 3D's accumulated unit installations remains ahead of Helisys by a margin of more than 4 to 1.

Sales from Japanese system manufacturers have been slow. At the end of '94, the installed base of RP units in Japan represented an estimated 14% of the worldwide base of installations. However, Denken Engineering and Kira Corp. are beginning to move systems. These companies sell systems priced at about $75,000 and $140,000, respectively, which is much lower than the average cost ($530,000) of other Japanese RP systems.

System sales from European vendors are growing, with EOS leading the pack. EOS almost doubled their system sales in '94 (16 units) compared to the previous year (9 units). In the first six weeks of '95, the company reported sales of 9 stereolithography and selective laser sintering machines.

3D Systems' installed base represents half of all systems installed. The remaining 15 system manufacturers share the other half. With an installed base approaching 500 systems, a major portion of 3D's revenue now comes from non-system sales such as resins, maintenance agreements and services from their technical centers.

Service business: The list of service bureaus (SBs) has grown from 105 to 155 in one year, according to CAD/CAM Publishing, Inc. (San Diego, CA) which publishes the Rapid Prototyping Report. Also, established SBs have expanded their operations by adding more machines and people as the demand for RP parts and related services have increased. Laserform, Inc. (Auburn Hills, MI) once again teamed with Wohlers Associates to determine the approximate size of the RP service business. Conservatively, we found that the worldwide RP part-making business has grown to an estimated $95 million in 1994. This figure does not take into account the secondary tooling and duplicate parts that result from RP patterns. Add in an estimated $83 million for this segment of the business.

Forecast for 1995-96: The near-term future for RP is bright. Based on recent growth trends, Wohlers Associates forecasts the '95 market to exceed $318 million, up from 1994's $198 million. Furthermore, Wohlers Associates expects the market to reach $475 million in 1996. These forecasts include the sales of RP products and services, but they do not include revenues generated from secondary tooling and duplicate parts. Unit sales should hit the 1,500 mark by the end of '95, with as many as 540 units sold this year.