METHODOLOGY

Heavy Reading’s resources were used to identify as many vendors as possible. Websites were first trawled to obtain product information from online brochures, data sheets, and installation manuals. Vendors were then contacted and asked to participate. Those responding positively were interviewed about the key aspects of their products, markets, and strategy (each interview lasted about an hour). After the interviews were completed, a comprehensive set of product features and metrics was put into a series of tables, which were sent to the vendors to complete.

When all of this data was returned, a related set of comparative scoring tables was constructed. Scoring systems were devised, which were weighted top-down analyses. The scoring tables were constructed by taking the most important features and metrics and weighting them to reflect our view of their importance to network operators. For example, the top-level scoring categories for trunk media gateways were first chosen, then weighted as follows:

- Equipment ............................................... 5
- TDN Interfaces ......................................... 10
- Broadband Interfaces ................................. 10
- Switching and Broadband QOS ..................... 10
- Scaleability ............................................... 40
- Protocols and Codecs ................................. 15
- Signal Processing ....................................... 10
- Total .......................................................... 90

There was no reason to expand the total artificially to 100, so this was how it stayed. The other media gateway top-level scoring systems were also held to a total of 90, so that the relative success of the products in each category could be judged. Each of these top-level categories had known sub-categories, which were weighted proportionally. For instance, the heaviest-weighted category, scaleability, comprises five sub-categories, all quantitative metrics in this case:

- Number of DS0 trunks per cubic foot .................. 15
- Maximum BHCA per cubic foot .......................... 10
- Maximum calls set-up per second per cubic foot ....... 5
- Maximum number of simultaneous calls per cubic foot .. 5
- Maximum broadband interface IP throughput per cubic foot . 5
- Total ........................................................................ 40

Quantitative metrics were used only when a majority of the product responses had provided the requested numerical values. No metrics with a potential for vendor misinterpretation were used.

Another point prompting explanation is the choice of thresholds for top scores in the categories. The original idea was to link them to the requirement for 1 million BHCA in an average chassis of around 5 cubic feet. This obviously worked for BHCA, but the other maxima were altered according to the number of products, which had high values. If one stood out from the rest, the maximum was located below that one and possibly above the next. If there were several close together, the maximum was placed among them.

Other general scoring was applied as follows:

- Non-disclosure of a feature drew zero marks.
- A feature put down as “in development” or as a “software upgrade” scored zero marks.
- A quantitative non-disclosure (a tick instead of a number) scored zero marks.

When the vendor-completed tables were returned they were checked for self-consistency, and against data sheets. Any peculiarities or anomalies were discussed with the vendor concerned.