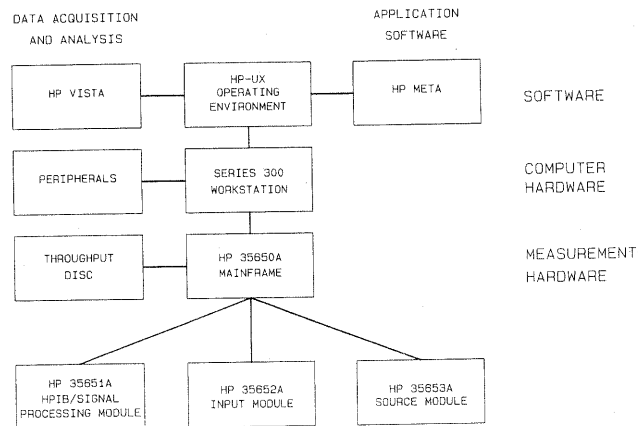




HP's ME Series 90 multichannel test system closes the design loop by linking HP mechanical CAD tools with test results.

ME Series 90 Test System

The ME Series 90 is an expandable, off-the-shelf multichannel test system with applications in structural testing and analysis, vibration analysis, control system testing and general signal analysis from 61 μ Hz to 51.2 kHz. The ME Series 90 closes the design loop by linking HP's computer-aided design tools with test results. Dynamic mechanical testing completes this link by allowing the engineer to compare the mechanical performance of the prototype or final product with the analytical model developed with other CAE tools. In addition, dynamic mechanical testing is used in the design phase and throughout the product life cycle to troubleshoot noise and vibration problems.



HP ME Series 90 system diagram

The ME Series 90 is a modular, expandable system based on the HP 9000 Series 300 technical computer, HP 35650A Series measurement hardware, HP VISTA Signal Processing Software and the HP META Structural Analysis Software. The system can be configured initially with as few as one input and one source module and expanded up to 62 input and source modules, in any combination. Large channel count systems required for large tests can be partitioned into a number of smaller ones by merely adding additional computers and software packages. For users that require a transportable system, HP META can be used together with the HP 3562A Dual Channel Dynamic Signal Analyzer to form the HP 3562S structural Analysis System.

Applications

The system completely addresses the analysis of the response of a mechanical system to dynamic loading. Modal analysis testing is an important process of the design optimization process in structural systems such as aircraft, machine tools and computer disc drive actuators. The applications software allows the engineer to measure these characteristics and simulate design changes before changes are made to the actual structure.

Monitoring the vibration levels of operating machinery can yield useful, important information that can be used to predict failures before they occur. Maintenance can be planned and scheduled and downtime can be minimized. Multichannel analysis provides for continuous monitoring of large, complex installations. Computer aided analysis and database management takes the guesswork out of this analysis.

Environmental vibration testing yields information critical in the design of components that will be exposed to high levels of shock and vibration. Acoustic testing is important in designing quieter products and pinpointing the sources of noise in systems.