



AS-BUILT SURVEY FOR PLANNED EXPANSION OF SEMICONDUCTOR FACILITY

INTEL BUILDING, SANTA CLARA, CA

PROJECT GOALS

- Perform as-built survey
- Provide 3D model and table of dimensions for design of planned expansion

PROJECT FACTS

- 150 ft. x 60 ft. x 16 ft. semiconductor facility
- Scan time: 2 hours
- Modeling time: 6 hours
- Project performed March 1998

CYRAX BENEFITS

- 50% time savings
- Ability to do the as-built survey without disrupting simultaneous construction activities
- Additional detail was collected for future use

Bergen Industries, in cooperation with Cyra Technologies, Inc., provided laser scanning and 3D modeling services for the interior of an Intel semiconductor facility in Santa Clara, CA. The facility was being converted from a storage facility to a production facility.

The *Cyrax*™ system was used to scan the interior of the Intel building to accurately measure the distances between 28 rectangular, concrete column faces. The purpose of this was to aid the client in defining the sizes of new steel beams. These beams were to be installed in conjunction with replacement of the building's roof and for a planned facility expansion. The size of the facility was 150 ft. by 60 ft. by 16 ft. (height) and the 28 columns were located approximately 12 ft. apart from each other.

The scanner was set up in three locations within the building and a total of 10 scans

were taken. These scans produced a total of approximately 1 million points for the subsequent 3D modeling activity.

The alternate method that was considered for this project was taking measurements manually. *Cyrax* provided a considerable time savings (approximately 50%) over the manual method and also provided the client with additional detailed information for future uses. The accuracy of *Cyrax* measurements was verified by cross-checking against manual methods. Agreement was within 1/16 inch.

An important consideration for this project included the ability to collect data while construction personnel were working inside the building. Using *Cyrax*, Bergen Industries was able to complete the as-built survey without disrupting any of the construction activities.

CYRA

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