

Zeitschrift: IABSE proceedings = Mémoires AIPC = IVBH Abhandlungen
Band: 8 (1984)
Heft: P-80: Using computers in the design of structures

Artikel: Use of computers in an american consulting firm
Autor: Degenkolb, H.J.
DOI: <https://doi.org/10.5169/seals-38344>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 22.08.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Use of Computers in an American Consulting Firm

H.J. Degenkolb

Our firm practices only in the structural engineering field on a consultation basis.

We have 7 principals and 15 design engineers using 4 machines (mini-computer and three terminals into McAuto).

All the computer equipment is located in a separate room. Each engineer uses the equipment as needed.

The mini-computer is an Olivetti P 6060 that is used for

- 2D Truss and Frame Analysis
- Concrete Column Analysis and Design
- Steel Column Evaluation
- Continuous Beam Analysis
- Soldier Beam Evaluation (in-house program)

This computer has a thermal printer with graphics capabilities, 2 floppy discs, 48k memory, and RS232 plug compatibility with mainframe computers.

We also utilize McAuto, a computer service bureau having both IBM and CDC equipment. Access via telephone connection with three terminals and the Olivetti P 6060. Used for:

- Major 2D and all 3D Static Analysis
- All Dynamic and Finite Element Analysis

All output and graphics printed at McAuto's San Francisco office.

Our use of the computer on a typical design project varies with the design phase:

- At the schematic stage, the computer is not used with all analysis being performed by hand, possibly with calculators.
- At the preliminary phase, key portions of the structural system will be analyzed by computer.
- At the working drawing stage, the final structural analysis is performed by computer.

It may be done on only parts of the structure or in some cases it may involve the entire structural system in a 3D model. Depending on the structure, the analysis will be either static or dynamic.

The computer is used for final member sizing of various structural elements. Members are never sized automatically without careful verification of the analysis results and design routines.

We are just beginning to participate on design teams which use computer drawn plans for all disciplines. These are produced by a service bureau for the entire team. Results have been good, but production always takes longer than expected. Also, accuracy is always a big problem since we are dealing with a terminal operator, not a trained draftsman.

Eventually, we expect to bring all of our analysis capabilities in-house by purchasing a large computer or additional micro-computers.

We also expect to develop a computer-aided drafting capability. In order to do this, we must be able to purchase equipment which is compatible with equipment used by the other disciplines so that common plan information can be shared.