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PREVIEW

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**Benchmark evaluation of kitchen design specific computer-aided
design software for conformance to "Kitchen design...graphics
and presentation standards"**

Markussen, Phyllis A., Ed.D.

The University of Nebraska - Lincoln, 1993

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PREVIEW

BENCHMARK EVALUATION
OF KITCHEN DESIGN SPECIFIC COMPUTER AIDED DESIGN SOFTWARE
FOR CONFORMANCE TO
"KITCHEN DESIGN...GRAPHICS AND PRESENTATION STANDARDS"

by

Phyllis A. Markussen

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Education

Major: Interdepartmental Area of Administration,
Curriculum, and Instruction

Under the Supervision of Professor Birdie Holder

Lincoln, Nebraska

May, 1993

DISSERTATION TITLE

Benchmark Evaluation of Kitchen Design Specific Computer Aided Design

Software for Conformance to "Kitchen Design...Graphics and Presentation Standards"

BY

Phyllis A. Markussen

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BENCHMARK EVALUATION
OF KITCHEN DESIGN SPECIFIC COMPUTER AIDED DESIGN SOFTWARE
FOR CONFORMANCE TO
"KITCHEN DESIGN...GRAPHICS AND PRESENTATION STANDARDS

Phyllis A. Markussen, Ed.D.

University of Nebraska, 1993

Advisor: Birdie Holder

The purpose of the study was to evaluate six kitchen industry specific personal computer aided drafting software programs to determine whether they were capable of producing project documents in conformance to industry standards of graphic presentation. This would ensure that designers using these programs would complete all phases of design and produce project documents in conformance with graphics and presentation standards of the industry.

Performance indicators (benchmarks) were derived from the National Kitchen and Bath Association's "Kitchen Design...Graphics and Presentation Standards" and incorporated into an instrument which was used to evaluate the software. The instrument consisted of design features inclusive of the full scope of visual communication of design solutions in graphic format.

All software was installed on baseline hardware according to installation routines outlined in

documentation accompanying the software. The instrument was administered independently for each current copy of the software. Whereas the instrument was administered during the design phase, judgments were exercised and inferences drawn, both during the administration of the instrument on the software, as well as after the completion of the design, using the printed document generated by the software. The data were summarized into a frequency distribution. The location of each software within the distribution was used for comparison.

As a result of the study it was found no one software performed design features fully and completely in conformance to industry standards in production of project documents. Some software came closer than others to total conformance. Determining how close each individual software came to conformance was realized by examining the amount of remediation each software required in order to conform. Aggregate remediation required by individual software to conform ranged from nearly one-half to nearly two-thirds of all design features necessary to produce printed project documents.

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It is to them that I dedicate this work in the hope that it will serve as inspiration for their own

educational pursuits. It is my heartfelt wish that this dedication provides them the encouragement to seek their own dream as they have so unselfishly enabled me to fulfill mine.

P.A.M.

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CHAPTER I

INTRODUCTION

Presently most kitchen designers design kitchens and baths without the aid of a computer. A typical process is as follows. A client may be qualified by general rules of thumb, preliminary sketches, or hand calculations. During a client interview and site visit the actual kitchen space is reviewed and carefully measured. Preliminary field sketches may be made. The designer then returns to his/her drafting board to produce several possible solutions. Although generally conceptual in nature each design includes enough detail to successfully communicate the suggested solution to the client. In addition the designer makes sure all solutions are within the client's budget. Already at this point several floor plans and even perspective drawings may have been produced in order to provide the client with enough information upon which to make a decision. When that decision is made the plan is detailed. The final project documents are then hand drafted. If the client decides to change any part of the design the entire process must then be redone.

The Council of Societies of the National Kitchen and Bath Association is the professional organization of

Certified Kitchen and Bath Designers. Among the responsibilities of this organization is that of establishing the standards of excellence for kitchen design. An integral part of the standards of excellence in design is the visual communication of design solutions in graphic format. In 1990 the Council of Societies published "Kitchen Design... Graphics and Presentation Standards for the National Kitchen and Bath Association." This publication established detailed professional standards of visual presentation for manual drafting of project documents consisting of floor plans, mechanical plans, soffit plans, countertop plans, construction plans, elevations, perspectives, dimetrics, obliques, isometrics, trimetrics, specifications, contracts, and the titles of project documents (NKBA, 1990). These standards of graphic presentation are used as standards of communication by Certified Kitchen Designers in documents that can be accurately interpreted by other users. They also provide the criteria of graphic communication for passing the examination for certification as a Kitchen Designer. When the Council of Societies established the "Graphics and Presentation Standards" they expected conformance to manual drafting standards.