

AC 2010-1349: A DELPHI SURVEY TO DETERMINE NAME CHANGE POSSIBILITIES FOR THE ENGINEERING DESIGN GRAPHICS DIVISION

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A Delphi Survey to Determine Name Change Possibilities for the Engineering Design Graphics Division

Abstract

The Engineering Design Graphics Division of the American Society for Engineering Education has been considering a name change for several years. We have sought input at the business meetings at both the annual MidYear Conference and the annual ASEE Conference and a list of suggested names has been compiled. A Delphi survey is currently planned to help us achieve consensus on this issue. We are asking the participants to help determine if any of these names should replace the Engineering Design Graphics as the Division name, or if there are names that have not yet been suggested. The Delphi technique is conducted through a series of rounds which give participants feedback from the previous round and allow them to reevaluate their responses. This Delphi will be conducted electronically with all survey instruments and responses made via the web. The objective of this Delphi is to gather consensus about the possible names, not to determine the best name. A vote of the EDGD membership would be required for a name change. Everyone who is on the EDGD listserv will be invited to participate as a panelist on this survey.

Because the Delphi encourages comments that can be viewed by all the participants it is possible that we will have dialog to support the suggested name changes. It is also possible that the outcome will be to continue using Engineering Design Graphics as the name for the Division. This Delphi survey will give a large number of EDGD members the opportunity to participate and give their opinions. This paper will describe the methods used for this survey. The presentation will discuss the outcomes of the survey and give suggestions for further action.

What is in a Name?

The Engineering Design Graphics Division has been in existence since 1928 and was initially called the Engineering Drawing Division. In 1958 the Committee on Aims and Scope made this recommendation, “Whereas the term *Engineering Graphics* characterizes more accurately the scope of our work, which includes graphic analysis and problem solving as well as the description of objects for manufacture; therefore we recommend that the name of the Engineering Drawing Division of the American Society for Engineering Education be changed to the Engineering Graphics Division of the American Society for Engineering Education”.⁴ This would remain the official name for less than ten years. At the ASEE Annual Conference in June 1969, after much heated debate and sober deliberation, the membership of the Division approved another name change. The Division’s official name became the Engineering Design Graphics Division of the American Society for Engineering Education.

In the 1993 a Special Edition of the *Engineering Design Graphics Journal* was published. This special edition was in celebration of the 100th anniversary of ASEE and the 65th year of the Graphics Division. The title of this special edition was “*The Evolution of the Engineering Design*

Graphics Division of the American Society for Engineering Education, 1928-1993.” It was recounted and recorded by William B. Rogers. While discussing the name changes of the Division over the years, Rogers says this,

The graphics smoke screen camouflaged our course content for barely one decade, the design smoke screen for two. Is it time for another pseudonym? The computer is evidently here to stay. Computer hardware and graphics software have taken over most manual-drafting tasks, and improvement in capability and ease of use are implemented hourly. Most of us, even this old curmudgeon, have achieved a minimal proficiency with computer graphics. How about: Division of Computer Graphics? Division of Computer Aided Design? Division of Computer Aided Drafting and Design? Division of Computer Aided Graphics and Design? These are not intended as serious suggestions, merely the idle rumination of an old man late in the day. I would vote (again) for the Division of Engineering Drawing!¹

The current name, Engineering Design Graphics Division has been in place for 40 years and it is appropriate that we consider other options. In the end it will be the decision of the membership.

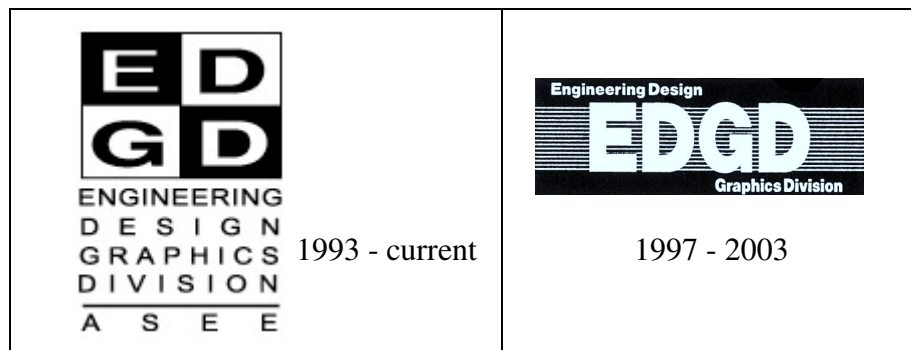
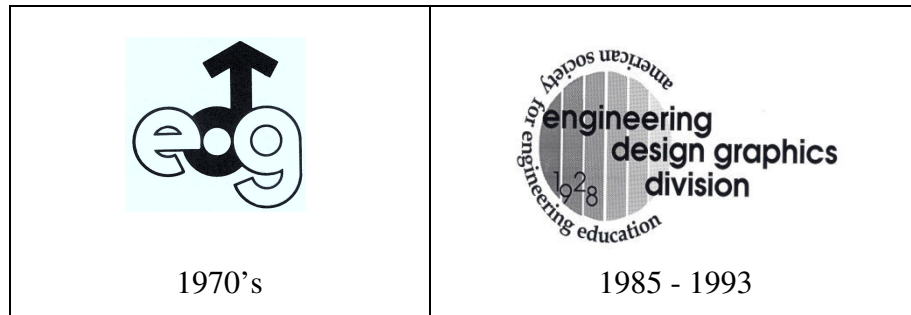
Engineering Drawing Division	1928 – 1958
Engineering Graphics Division	1958 – 1969
Engineering Design Graphics Division	1969 – current

It should be noted that the original name for ASEE was the Society for the Promotion of Engineering Education which was changed to the American Society for Engineering Education.

Society for the Promotion of Engineering Education	1893 – 1946
American Society for Engineering Education	1946 – current

Other Changes

The name of the Division isn't the only thing that has changed. As times have changed so has the visual representation for the Division. The first logo that was used in the Engineering Design Graphics Journal was in the 1970's. This logo was implemented by Jim Earle and was only used for several years and for whatever reason was discontinued. The next appearance of a Division logo was in the late 80's. The editor was Barry Crittenden and the designer was Peter Miller. This logo was used fairly consistently through 1993. In 1993 a contest was held and a new logo selected. Mary Sadowski was the editor at the time. In the late 1990's Judy Birchman was the editor and a different logo was used. These dates are approximate; however, they give us a feel for some of the changes in the Division over the years.



Consensus Building

A Delphi Study is a consensus-building forecasting technique that has been used by organizations, agencies, and corporations for making predictions and setting agendas. Although this technique was developed in the “business world,” a number of educational leaders including Clark & Scales¹, Sadowski², and Sorby, Bohmann, Drumme, Frendewey, & Mattila³ have used this technique in an educational context for the design of curricula and programs. In this context, a Delphi Study typically consists of several rounds, conducted with a panel of experts, to reach consensus on defining the important elements of a curriculum. A Delphi Study also lends itself to reaching consensus without a need for face-to-face meetings among panel members, making the study relatively easy to implement, especially for a panel with broad geographic representation among its members. A chief characteristic of the Delphi technique is its’ interactive nature. Panelists are able to interact with the material being generated with each round and have the opportunity to make choices and express opinions which are then shared with the entire group.

One of the disadvantages of Delphi’s conducted in the past was that the process was often slow and time-consuming. Because the instruments were delivered through the mail, long periods of time had to be built into the process to account for the time the instruments were in the mail. Because this survey was conducted using electronic methods the times for dispersal and collection of the surveys was drastically reduced.

The first step in developing this Delphi Survey was to gather a list of possible names for the EDG Division. Division members were solicited for their opinions at several EDGD meetings and the following list was compiled. This was the initial list presented to the panelists.

Design and Visualization Division
Design Graphics Division
Engineering Design and Visualization Division
Engineering Design Graphics and Visualization Division
Engineering Design Graphics Division
Engineering Graphics Division
Engineering Graphics, Visualization, and Simulation Division
Engineering Graphics/CAD in Education Division
Graphics and Visualization Division
Graphics and Visualization in Education Division
Graphics and Visualization in Engineering Design Division
Graphics Communication and Design Division
Graphics Communication, Visualization, and Design Division
Graphics Engineering Division
Graphics, Modeling, and Visualization Division
Information Engineering & Design Division
Visualization in Engineering Education Division

Panel Selection and Composition

The panel for this Delphi was composed of 37 members of the Engineering Design Graphics Division of ASEE. They were solicited in person at the October 2009 EDGD MidYear Meeting in Erie, Pennsylvania and by email through the EDGD listserv. The solicitation for participation gave a brief explanation of the purpose for this Delphi. (Appendix I)

Members were asked to respond only if they were willing to participate. There were a total of 37 panelists for this Delphi Survey represented by 9 women 18 men. All but one of the panelists is currently teaching graphics at the post secondary level. The panel represented 17 states and one Canadian Province. It included one community college, three private college/universities, and one Canadian university. Although most of the universities represented are public institutions, small, medium, and large institutions were represented.

Process

This Delphi was conducted via the web using Qualtrics Survey software.

Round 1: Panelists were asked to rate each of the suggested names, add comments, and add new names.

Round 2: Panelists received a compilation of the Round 1 responses and asked to review the data, read the comments, and with this new information rate the names again, add new names, and additional comments.

Round 3 and Round 4: These rounds are the same as Round 2. Round 4 is only needed if consensus is not reached in the first three rounds.

Outcomes

As noted in earlier the results of this Delphi survey will not be definitive in that the results should identify top contenders and these contenders would need to be vetted by the EDGD Executive Committee and voted on by the membership.

Results

At the time of the paper submission, this survey was not completed so the results are not yet available. The authors hope to generate an electronic discussion among the panelists that will lead us toward a consensus. A name change for the division has been a topic of discussion for several years and it is hoped that this survey will help define the issues and the possible alternative names. The authors will present the findings of this survey at the annual meeting in June.

Summary

Change has been constant throughout the history of the Engineering Design Graphic Division and the possibility of a name change has been brought up several times since the last change which was in 1969. This survey will provide information and a guide for the Executive committee of the Division.

Bibliography

1. Clark, A. C., & Scales, A. Y., Quality Characteristics of a Graduate Teacher Education Program in Graphic Communications: Preliminary Results from a Delphi Research Study, *Proceedings of the 54th Annual Engineering Design Graphics Midyear Meeting*, Biloxi, MS, (November 1999), pp. 45-58.
2. Sadowski, M. A. The ACM-SIGGRAPH Delphi, a report to the Engineering Design Graphics membership. *Engineering Design Graphics Division, Mid-year Meeting Proceedings*, (1990) pp. 1-16.
3. Sadowski, M. A., Ed., *Engineering Design Graphics Journal*, (1993) V57, Special Edition.
4. Sorby, S. A., Bohmann, L. J., Drummer, T. D., Friendewey, J. O., Mattila, K. G., and Sutherland, J. W. Development of a Curriculum for Service Systems Engineering Using a Delphi Technique, *Proceedings of the 2005 American Society for Engineering Education Annual Conference & Exposition*. (2005).

Appendix I

EDGD Recruitment

Dear EDGD member:

You may be aware that the Division has been discussing the possibility of a name change. We have gathered a list of possible names and would like your help to determine if any of these names should replace the Engineering Design Graphics as the division name, or if there are names that have not yet been suggested.

Mary Sadowski and Pat Connolly will be conducting a Delphi survey in an attempt to build consensus around a new name for the Division. The results of this Delphi survey will not be definitive in that the results should identify top contenders and these contenders would need to be vetted by the Executive Committee and voted on by the membership.

By this email we are asking if you would consider being a participant in this process. Everything will be done electronically. Others may know that you are a participant; however, no one will see your individual responses except the investigators who are compiling the data.

A Delphi survey is conducted through a series of rounds and this Delphi will be conducted via email and the web.

Round 1

You will be asked to rate each of the suggested names, add comments, and add new names.

Round 2

You will receive a compilation of the Round 1 responses and asked to view the data, read the comments, and with this new information rate the names again, add new names, and add your comments.

Round 3 and Round 4

These rounds are the same as Round 2.

After Round 4 we will compile the information and forward the result to the EDGD Executive Committee for further consideration. If you are willing to participate, send an email to Mary Sadowski at sadowski@purdue.edu indicating your willingness to participate.