

Editorial Engineers for the Future

The selection Prof. Melezinek has made from contributions to the joint IGIP-IEEE-ASEE conference in Vienna and Budapest in the Summer of 1990 is remarkable in its manifestations of a fast coming together of information on engineering heuristics practices in different parts of the world. Exemplified by Billy Koens presentation on how to apply your heuristics, we can indeed expect, in the not too distant future, a coalescence of engineering approaches across the world. What I mean by this is, that when we know how the Japanese, the Germans, the Americans and others resolve their engineering problems we may get a unified world approach to engineering design—possibly a 'total quality' approach. What will this unified approach imply? We can expect the same approach to solving engineering design and quality problems, taken out of a 'catalog' of guidelines on how to initiate and practice product development. These guidelines will cover design, costing, engineering quality, evaluation, testing and marketing practices. One may conclude then, that it really will make no difference where, i.e. from which source or country a product emanates as long as these guidelines are followed, as the quality of the product is going to be the same everywhere. To a certain extent one could reach such a goal—were it not for cultural differences. A strong cultural component is however, a quite basic ingredient in engineering approaches as can be also gathered from Prof. Noda's paper on Japanese engineering education. Cultural differences do have a mysterious influence on engineering quality. A prime example could be taken from Europe. Our question is—with Europe becoming economically, and to some extent culturally more integrated, are we going to have 'European' heuristics in the sense of Koen's article? Well, the answer to this question will be revealed in time. One may feel though that we may be forfeiting our cultural differences for a uniform quality of engineering products. Do we really like the idea that in the future we will have a uniform good—or poor (!) for that matter—engineering product from any country you name?

In conclusion to this editorial I would like to express my thanks to Prof. Melezinek, and our editorial staff for the work they have put in to get this issue together for publication.

Michael S. Wald

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research is. What is a scientific question? When may our speak of a method, when of a technique? When is it just a finding as regards a finding, scientifically proven? How are scientific findings discussed with respect to published material? Attaining expertise in such research is independent of the topic of a thesis. From experience, I'm convinced that dissertations of today are too long and the time for their elaboration could be significantly shortened, simply by choosing an appropriate topic.