

Preface

This book was inspired by observations, research over the last several years, and subsequent talk on the subject at SIGGRAPH 2012. The field of 3D Digital Design has added several photogrammetry and retopology-based technologies resulting in many new and accelerated workflows, which have also affected the 3D design education process.

It has been a journey not only in the writing, but in the research and approach. What we describe in these pages is an ongoing case study that started many years ago, and will continue for as long as we continue to teach and to learn. As “early adopters” in the field of technology influenced design-based education we naturally push for advanced technology, but as part of a larger institution we must accept what the constraints of budget and adherence to tradition dictate. We have found that these opposing forces create a natural balance; that in some cases constraints lead to greater creativity than freedom ever can—but in other cases the opposite is true.

The book looks at the convergent nature of technology and its relationship to the field of photogrammetry, and 3D design. This is a facet of a broader discussion of the nature of technology itself and the relationship of technology to art, as well as an examination of the educational process itself. We have addressed the question of how we are adjusting and will continue to adapt to further disruptive technologies.

Over the years, we have been faced with this question and more; in the development of a post-secondary curriculum we are always questioning—are we teaching art and design, or are we training technology? Are we teaching our students to think, to ideate, to create, or are we teaching them how to use tools? Clearly, the two concepts are inexorably intertwined, but in any educational institution or college curriculum it is important to make the distinction, and to understand the areas that are clearly defined as well as those that are not.

Each year we are presented with new technology. Software and hardware tools are developing at an extremely rapid rate and with each new change, each new outgrowth, we must make important decisions about whether or not these new tools are important enough to incorporate into our existing curriculum. Do we keep pace for the sake of keeping pace, or will our adaptation to change foster creativity and new thought? Given the existing constraints of time and budget, what are we willing to sacrifice in order to embrace these changes and fold them into our

curriculum? Which tools, methods, approaches, or classes can give way to this change? Clearly these questions seek answers, this book offers insights for ways to integrate some of these new technologies into the field of design, and from a broader standpoint it also looks ahead, raising further questions and looking to the near future as to what additional technologies might cause further disruptions to 3D design as well as wonderful creative opportunities.

Integrating 3D Modeling, Photogrammetry and Design

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