

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

<b>Topic</b>	<b>IPD Book Module: Project Documentation</b>	<b>Revision : : 090102</b>
<b>1. Content</b>	Year long documentation	
<b>a. What is it?</b>	<p>A comprehensive document detailing the process and findings of an IPD project. The document is updated as the project progresses, with a section or chapter added for each project phase. The document is both a record of the decisions that led to the final result of the project and a repository of useful information gleaned during the process but not necessarily incorporated in the final result.</p>	
<b>b. Why is it important?</b>	<p>There are many reasons to produce a comprehensive document detailing all the results of an IPD project:</p> <ol style="list-style-type: none"><li>1. The research, analysis, and concept generation phases of a project produce insights and results that are used by the IPD team to guide the evolution of the project. These insights and results may also be useful to people who will work on later stages of this project.</li><li>2. These same insights and results may also be useful to other teams pursuing related projects.</li><li>3. A final project presentation is necessarily limited in time and detail. A comprehensive document provides additional detail to bolster the argument of the final presentation.</li><li>4. A comprehensive project document conveys the scope of the development effort, and can justify the resources expended on the project.</li></ol> <p>A project document captures what was learned so that no one will need to duplicate the work that the team undertook in a design process.</p>	
<b>c. Where is it used?</b>	<p>A project document will be used differently by different people. For the project team, the creation of the document may play the most important role, as it helps to make and justify the decisions that it documents. The project team can also assemble the document into a hardcopy binder that may be laid on a table with a satisfying sound to impress an audience.</p> <p>Later, the document serves as a convenient reference of decisions and findings, both for the project team and others. In a well-organized product development enterprise, existing documents of past projects will be perused by teams beginning new projects as part of project planning. In practice, it is more likely to be consulted when there are specific questions about the results and insights, for example if one member of a project team says something like, "Wasn't this issue covered in the focus group analysis by that project done by that team two years ago?"</p>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

Topic	IPD Book Module: Project Documentation Year long documentation	Revision : : 090102
<b>2. Procedure</b>	<p>The project document should contain all the relevant information created or uncovered during the course of the development process. So what does a completed document look like? Is it a binder holding a thick stack of papers? Is it an electronic file, or an electronic archive on CD-ROM or other media? Does it include multimedia items such as video, sound clips, or still pictures, and if so, in what form are these transferred from the team to the audience?</p> <p>A team should prepare the project document following a few simple principles:</p> <ol style="list-style-type: none"><li>1. To the extent that it is possible, the document should be available as a hard-copy binder that may be laid on a table with a satisfying sound.</li><li>2. An electronic version of the printed document should also be available as a single PDF file. This document is referred to as the text document in both its printed and electronic forms.</li><li>3. Three types of material should be included as electronic files:<ol style="list-style-type: none"><li>a. Material that is not suitable for print, such as movies or sound files.</li><li>b. Complete sets of raw material, such as photos, of which a few selected examples may be integrated in the text document.</li><li>c. Original files, such as spreadsheets or solid model files, that afford richer opportunities for examination and analysis than their printed copies. As a general rule, this includes any file that cannot be opened by a word processor.</li></ol></li><li>4. The document should be organized chronologically, and should be kept up-to-date as the project proceeds.</li><li>5. Although the document as a whole should be comprehensive and impressive, it should include concise, pithy, and informative executive summaries for each section. These should be easy for the reader to find.</li></ol> <p>Following these principles, it becomes clear that the section (or chapter) of the project document that corresponds to each project phase should be written and added to the document as that phase is conducted. The document thus grows by a section for each design phase. In addition, the first section of the document, which serves as an introduction to the entire document, should be revised after each stage of the project.</p>	
<b>Step-by-Step Procedure</b>	<p>Project documentation is an ongoing activity. In order for this ongoing activity to work smoothly, some advance planning is required:</p> <ol style="list-style-type: none"><li>1. First, the team must determine which software programs it will use to create the document, and establish a mechanism for sharing files as work progresses.</li></ol>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

Topic	IPD Book Module: Project Documentation Year long documentation	Revision : : 090102
<b>Step-by-Step Procedure</b>	<p><b>2.</b> A template for the text portion of each section should be drafted. This template should include both structure and format. Structure refers to what content is required, and in what order; for instance, each section might have subsections labelled <i>Executive Summary</i>, <i>Introduction</i>, <i>Activities</i>, <i>Results</i>, and <i>Findings</i>. Format is concerned with margins, spacing, fonts, etc. Some teams put one person in charge of final formatting, some use a template. The end goal is always to ensure consistency.</p> <p><b>3.</b> An introduction to the document as a whole should be drafted, introducing the project as it stands at the present time. The table of contents should also be started.</p> <p>Once this system is agreed upon, as each portion of the project is conducted, a team member is assigned the responsibility to draft the relevant section of the document. This draft should be read and approved by at least one other person. As each section is completed, the overall Introduction and Table of Contents should be updated and the complete current version should be published so that it is available in both hardcopy and electronic versions.</p>	
<b>3. Notes for Users</b> <b>Document Conventions</b>	<p>The project document is both a single document and a collection of many individual documents, often shared or archived electronically. All team members are usually collaborating authors for the project document. Coordinating the writing effort is simplified by establishing and following conventions for files and their names.</p> <p>A project document will be made up of several types of files. The team should agree on a standard word processing format for the text of the sections, as well as a consistent written format for all sections. Each section should be maintained as a separate file. As much as possible, other types of editable files such as spreadsheets and solid modeling files should also use a standard format. This usually means that the team should agree in advance on which software program to use for each type of file. In business settings, decisions about software are often dictated by the company.</p>	
<b>File Names</b>	<p>Unless you are using a version control system to maintain a repository of your files, filenames will be the most important way to organize your project. Filenames should be descriptive, so that the subject, author, and date or revision of the file are obvious from the filename. Files that are subsidiary to other files should have the same beginning to the filename as the parent file. Different revisions or versions of the same file should have the same filename, except for differences in author, date, or revision.</p>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

Topic	IPD Book Module: Project Documentation Year long documentation	Revision : : 090102
<b>File Names</b>	<p>Capitalization and spelling should be consistent. These guidelines help ensure that related files will be listed next to each other in a folder. It is best <i>never to use</i> spaces in filenames, since not all operating systems handle them gracefully; instead, use the underscore ( _ ) or hyphen ( - ). Likewise, colons, semicolons, slashes, backslashes, question marks, commas, and quotation marks are best left out of file names. The particular filename convention is not as important as adherence to an agreed-upon format.</p> <p>For example, say that the project is called Super Soup Spoon, or SSS for short. One possible convention is to give each filename at least five parts:</p> <ol style="list-style-type: none"><li>1. All filenames begin with “SSS”. If the numbering of sections is known in advance, as is typically the case if the project is documented chronologically, this could be “SSS1”, “SSS2”, and so on.</li><li>2. The second part of the filename describes the content, such as “Focus_Group_Results”. For files attached to the main file, such as audio or image files, this name would be extended, for example to “Focus_Group_Results_Photo12” or “Focus_Group_Results_Photo_Participants”</li><li>3. The third part of the filename is the author(s) or editor(s) of the file.</li><li>4. The fourth part of the filename gives the date of creation or modification. If this is given in the format YYYY_MM_DD, then multiple revisions of the same file will sort themselves chronologically. Letters “a”, “b”, “c”, etc. can be added to the date if more than one revision is on the same day.</li><li>5. The last part is an extension giving the file type, usually but not always three characters long. Note that some operating systems hide this information from the user.</li></ol> <p>Each part of the filename in this example contains underscores for legibility. The parts may be separated by hyphens, except for the final extension, which is preceded by a dot. (There is nothing magical about this particular use of underscores and hyphens, it is simply one convention; the dot before the extension is universal.) Thus the file SSS3-Focus_Group_Results-Jones-2008_09_19.doc is a word processing file (.doc) with the text of Section 3 of the Super Soup Spoon project document. Section 3 is the focus group report, and it was most recently written or modified by Jones on September 19, 2008. If Jones makes three separate revisions to this same document on September 23, the third revision would be named SSS3-Focus_Group_Results-Jones-2008_09_23_b.doc. As a general rule, a new version or revision should be saved under a separate name whenever a document is shared among the team. It is convenient to have a central repository for this sharing, but documents may also be sent by email if necessary. What is important is that all team members have access to the revisions they need.</p>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

<b>Topic</b>	<b>IPD Book Module: Project Documentation</b>	<b>Revision : : 090102</b>
<b>Executive Summary</b>	<p>Year long documentation</p> <p>An executive summary is a condensed description of a document containing (only) the most relevant and important information. The job of an executive summary is to convey, in the least amount of time possible, whatever content of the document an executive decision-maker would need to make a business decision, or to determine that the details of the document require closer examination. If possible, the executive summary should fit on a single page, on the assumption that the busy decision-makers who read it will need a good reason to turn to the second page. Whether or not the summary fits on a single page, it should be as short as possible. It should start with the most compelling information; this does not necessarily mean that the writer should lead with the conclusion, but that the first sentences, if they are not the bottom line, should convey the reason to continue reading to the bottom line. If the document itself contains a recommendation, the primary job of the executive summary is to sell that recommendation. If the document does not contain a recommendation, the primary job of the executive summary is to point out the most interesting or salient learnings. Each section of the project document should have its own executive summary.</p>	
<b>Abstract</b>	<p>An abstract is related to an executive summary, but is shorter and more neutral. Instead of selling the conclusions of the document, the abstract describes what is covered in the document without describing the particular findings or conclusions. An abstract is written for someone whom we assume may be interested in the content of the document, while an executive summary plays a more persuasive role. Sometimes it is appropriate to include both. The introductory section at the beginning of the document, which is updated as each section is written, serves as both abstract and executive summary while the document is under construction. When the document is complete, a separate abstract and executive summary should be provided.</p>	
<b>Elevator Statement</b>	<p>Related to the executive summary is the elevator statement. When writing an executive summary, assume you have one page to impress your audience. When preparing an elevator statement, assume you have a 30-second elevator ride to do the same. As with the executive summary, your goal is not to explain details, but to give a succinct and exciting overview that will inspire the listener to want to know more.</p>	
<b>Role of Presentations</b>	<p>Team presentations to management play a key role in many development projects, punctuating the project at important milestones. These presentations are used to capture the state of the project at the milestone, and to make an argument to management about the future direction of the project. How should these presentations be treated in the context of the project document?</p>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

Topic	IPD Book Module: Project Documentation Year long documentation	Revision : : 090102
<b>Role of Presentations</b>	<p>The project document, as mentioned above, will necessarily contain more comprehensive information than the presentation. The presentation may be seen as a sort of extended executive summary or elevator talk, directing the audience's attention to the most important points about the project that can be covered in some specified time. The presentation should have an end in mind, either to lead the audience to a conclusion that the team wants to promote, or to present the relevant facts to allow the audience to make a decision the team does not want or is not able to make on its own.</p> <p>Presentations almost always make use of projected images, and so many presentations are prepared using Microsoft Office PowerPoint presentation software that the term "powerpoint" or "powerpoint slides" is often used to refer to the projected portion of the presentation just as "Kleenex" is used to refer to facial tissue. (The name "PowerPoint" is a trademark, and strictly speaking it is incorrect to use any other capitalization, or to use the word to refer to presentations produced using any other software, or to fail to adhere to Microsoft's published trademark guidelines.) Printed versions of presentation slides may be included in the project document. However, it is generally more effective to incorporate the substantive images such as charts and graphs in the body of the document where they may be accompanied by a written explanation. An electronic version of any slides should be included with the project document.</p>	
<b>Institutional Memory</b>	<p>One of the uses of project documentation is to provide an institutional memory, capturing lessons learned in previous projects for the edification and convenience of future project teams. Therefore, the start of a project or project phase should generally include a review of documentation available from earlier projects. In a classroom setting, work by previous student teams is not expected to be relevant to the current project, though sometimes earlier work can serve as an educational sample.</p> <ol style="list-style-type: none"><li>a. Questions</li><li>b. Exercises</li><li>4. Notes for Managers</li></ol>	

**AD421 • ME445 • MKTG594 Motorola Project**  
Spring Semester, 2009**Stephen Melamed**, Industrial Design, College of Architecture+Arts  
**Albert Page**, Marketing, College of Business Administration  
**Michael J. Scott**, Engineering, College of Engineering

---

Topic	IPD Book Module: Project Documentation Year long documentation	Revision : : 090102
<b>Institutional Memory</b>	<p>The project documentation described here is designed for use by self-directed teams, and may produce a more comprehensive project document than is required by the manager of a more closely supervised team. On the other hand, as noted in the “Notes for Users”, documentation from prior projects is more likely to be consulted at the outset of a new project. Both documentation archiving and information technology systems are expected to be dictated by the organization.</p> <p>5. Notes for Instructors</p> <p>6. Outside Resources</p>	
<b>Reference</b>	Strunk and White, <b>The Elements of Style</b> , 4th edition, Prentice Hall, 2000 ISBN-13: 9780205313426	