

AU/ACSC/004/1998-04

AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

VALIDATION OF THE "SQUADRON COMMANDER
SIMUWORLD" LEADERSHIP PROGRAM

by

David W. Allvin, Major, USAF
Gregory S Buelt, Major, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Maj Mark H. Jordan

Maxwell Air Force Base, Alabama

April 1998

20020118 259

Disclaimer

The views expressed in this academic research paper are those of the author(s) and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Contents

| | <i>Page</i> |
|--|-------------|
| DISCLAIMER | ii |
| LIST OF TABLES | v |
| PREFACE..... | vi |
| ABSTRACT | vii |
| INTRODUCTION | 1 |
| Limitations..... | 2 |
| “SQUADRON COMMANDER SIMUWORLD” DESCRIPTION..... | 4 |
| VALIDATION METHODOLOGY..... | 7 |
| Advising Elements | 7 |
| Squadron Commander Course Curricula | 8 |
| Squadron Commander Survey | 8 |
| Survey Development..... | 8 |
| Sample Selection Method..... | 12 |
| Administration | 13 |
| RESULTS AND ANALYSIS..... | 15 |
| Advising Elements | 15 |
| Squadron Commander Course Curricula | 17 |
| Commander Survey..... | 18 |
| Overall Results..... | 20 |
| Realism and Credibility..... | 20 |
| Usefulness..... | 22 |
| Completeness | 23 |
| Functionality | 24 |
| Global Utility | 27 |
| General Comments..... | 29 |
| CONCLUSIONS AND RECOMMENDATIONS | 31 |
| Conclusions | 31 |
| Recommendations..... | 32 |
| APPENDIX A: ROAD MAP FOR SIMUWORLD VALIDATION SURVEY | 34 |

| | |
|---|----|
| APPENDIX B: SIMUWORLD SURVEY INSTRUMENT | 35 |
| APPENDIX C: SQUADRON COMMANDER COURSE CURRICULA | 37 |
| Air Mobility Command | 37 |
| Air Combat Command | 42 |
| Air Education and Training Command | 43 |
| APPENDIX D: TRANSCRIPTION OF SURVEY PARTICIPANT COMMENTS | 46 |
| BIBLIOGRAPHY | 60 |

Tables

| | <i>Page</i> |
|--|-------------|
| Table 1. Simuworl Scenario–Commander Course Curricula Correlation..... | 17 |
| Table 2. Overall Results | 20 |
| Table 3. Realism and Credibility Evaluation..... | 20 |
| Table 4. Usefulness Evaluation..... | 22 |
| Table 5. Completeness Evaluation..... | 23 |
| Table 6. Functionality Evaluation..... | 24 |
| Table 7. Global Utility Evaluation..... | 28 |

Preface

Leadership positions bring with them challenges and ever increasing responsibilities. Squadron commanders in the U.S. Air Force face some of the most dynamic challenges requiring exceptional skills. Students from ACSC AY1997 attempted to provide a creative leadership tool to aid squadron commanders in facing various situations. The program was called “Squadron Commander Simuworld” and was very well received by the Air University. The project on which this paper is based was created to validate the program as a useful leadership tool for squadron commanders. Validation of the program opens up possibilities for increased exposure to its target audience—new squadron commanders and squadron commander candidates.

We would like to thank Major Mark Jordan for his guidance and assistance throughout the research project. Major Fred Warren’s technical prowess proved invaluable in putting the program on the Internet, which allowed easy access for the participants. Finally we would like to thank all the participants for taking time out of their schedules to complete the program and survey.

Abstract

Students of ACSC Class AY1997 developed computer-based product named Squadron Commander Simuworld. The intent was to provide a technology product for squadron commanders to introduce them to real-world type scenarios a squadron commander may face. The AY1997 research team did not evaluate the product's effectiveness as a leadership tool. Our goal was to answer the research question: "Is the Squadron Commander Simuworld computer program an effective leadership tool for new squadron commanders and squadron commander candidates?"

Three methods were used to determine the program's effectiveness. The methods used are as follows: 1) use the expertise of representatives from the Judge Advocate General School and First Sergeant Academy to assess the validity of the advice given in Simuworld, 2) compare the courses taught in formal squadron commander schools with Simuworld, and 3) survey former squadron commanders after completion of the program.

The findings show previous squadron commanders found the program to be a valuable leadership tool. Survey data and associated comments validated the product in the eyes of those who have experienced command. A majority of the issues taught at the squadron commander courses were addressed in Simuworld. Finally, the advice given to the Simuworld Commander was consistent with the expert advice from the two schools.

This led us to the conclusion that Simuworld is a well-designed, valid, and useful leadership tool for prospective squadron commanders.

Chapter 1

Introduction

Quality leadership is essential to the success of a military organization. Recent events in the Air Force have highlighted this necessity. Whether it be the improper shutdown of friendly helicopters in Iraq, the T-43 crash with Commerce Secretary Ron Brown on board, or various fraternization incidents, the need for leadership and accountability within the units is moving to center stage. External events such as the continual drawing down of forces coincident with expanding commitments accentuate the escalating need for commanders with exceptional leadership skills. With all of the circumstances pointing to increasingly challenging tasks for future commanders, any product that can effectively assist squadron commanders in difficult decision making should be employed.

This was the task undertaken by students of Air Command and Staff College Class AY1997: provide a technology product for squadron commanders to introduce them to real-world type scenarios a squadron commander may face. The program would potentially hone decision-making skills in a “no threat” environment while reacquainting the user with various resources at his/her disposal. The result was a dynamic computer-based product named Squadron Commander Simuworld. This program was highly lauded, receiving the ACSC Dean’s Award for Leadership. Though the ACSC faculty

fully evaluated its content, they did not conduct a broad investigation into the usefulness and validity of the program in the real world, nor was it realistic to do so given the time constraints involved. More was needed to increase confidence in its utility as a leadership tool for new squadron commanders. This need was the genesis of our research project.

In order to accurately address the value of the product, we began with a research question against which we would test Simuworld. That research question is as follows: "Is the Squadron Commander Simuworld computer program an effective leadership tool for new squadron commanders and squadron commander candidates?" To further narrow the focus on this question, we chose to address three pieces of the leadership puzzle to validate its utility: 1) advising elements (representatives from the JAG and First Sergeant Academy), 2) leadership instruction (from various squadron commander schools), and 3) the leaders (former squadron commanders). We used the feedback from these three sources to determine the answer to the research question. Failure to validate the product as a useful leadership tool would not take away from its value as an innovative technological product, but may indicate areas for improvement to facilitate validation. Validation could open doors for Simuworld's broader exposure to various institutions throughout the Air Force. Although this is a worthy accomplishment in and of itself, it also greatly enhances its ultimate task: positively influencing the leadership skills of tomorrow's squadron commanders.

Limitations

Due to the nature of the survey and time constraints associated with the collection of data, we did not randomly sample among all current and former squadron commanders

throughout the U.S. Air Force. The survey participants were all within the Air University at Maxwell AFB, AL. Since selection to attend Professional Military Education in residence is a competitive process, the sample group was not purely random. Also, the small sample size limited our ability to evaluate whether the program was more beneficial to some squadron commanders based on the function of the squadron. The participants represented a wide variety of functional squadrons, but the number in each function was not large enough to present statistical significance to any preliminary data.

Chapter 2

“Squadron Commander Simuworld” Description

The creators of Simuworld developed a program that simulated a week in the life of a fictitious squadron and allowed the program user to play the role of commander. During the course of the week, the user encountered situations and received inputs from various resources to aid in contemplating ideas and strategies to deal with these scenarios. Simuworld used audio, video, graphics, and a variety of communications forms to include electronic mail, dialogue, and written correspondence.

Simuworld was presented in the HTML format, which allowed the user to easily access various links to enhance the situations. The links available were broken down into three major categories. The first major category involved correspondence. The links allowed the user to view information from the commander’s inbox, e-mail, or dialogue from phone calls. The next major category was links to professional reading. This was in keeping with the Air Force desire for officers to increase their knowledge on pertinent military issue and ideas. If the user had Internet access, he or she could view readings from such locations as Air Chronicles, AU Professional Reading Guide, and the Marine Corps Professional Reading Program. The last major link was to various organizations and individuals in the wing. These links included eyewitness accounts of a situation,

safety, Mental Health, the orderly room, the first sergeant, Social Actions, Military Personnel Flight, Security Police, and the Staff Judge Advocate.

Navigation through the program was accomplished via "hot links" in the HTML format. There was a link to navigation tips to increase ease of operation for first-time users. To give the user a big picture of the fictitious wing, a wing and squadron organization chart was included. That gave the commander a picture of the size and structure of the squadron.

The program could be accessed in one of three ways. The first way was to run the program direct from a CD-ROM if the user's computer was so equipped. A second avenue was to access the program through the Air University network and networking into a computer where the Simuworld program is stored. The final way was through the Internet with a given address and password. Despite the method of accessing the program, the navigation was identical.

To begin, the user must link to the daily schedule through a "schedule" icon for access to the scenarios. The schedule began on a fictitious Monday morning. As the day progressed, the user was confronted with scenarios that developed as part of day to day operations in a squadron. As previously mentioned, the user had the option to view any correspondence desired. Throughout the scenarios, the user was given the opportunity to access various wing organizations to determine what advice or regulations apply to the situation. Each day, the user was required to go to lunch to allow for transition to the afternoon schedule in which there may be schedule changes or new e-mail. If the user was unable to accomplish the program in one sitting, there were ways to return to the exact location at which the program was exited.

Once the user had taken "lunch" within the program and the afternoon portion of the schedule was available, the "end of day analysis" segment was also accessible. This "end of day analysis" gave a synopsis of the major events from that day and provided some key points for the user to consider in dealing with the scenarios. From the "end of day analysis," the user then had access to the next day. This process continued until Friday when the program was complete.

Chapter 3

Validation Methodology

The Simuworld program is the result of creativity and hard work by several dedicated officers. Was the focus of this creativity and hard work properly directed? Will it pay dividends for its intended audience (new squadron commander and commander candidates)? These queries are at the root of this project, but are academic unless one can determine the best way to answer them. In order to validate the program, we needed to access two of the best “teachers” on any subject: education and experience.

This logic led us to our three sources for validation: advising elements (JAG and First Sergeant Academy), curricula from squadron commander courses throughout the Air Force, and survey feedback from former squadron commanders.

Advising Elements

This step involved consulting experts for their advice concerning certain situations from the program. The two elements in Simuworld from which the squadron commander predominantly received advice were the first sergeant and Staff Judge Advocate. Air University is home of the Staff Judge Advocate School and First Sergeant Academy. Therefore, the expertise from the faculty at these two schools was used to validate the advice given in applicable scenarios.

Squadron Commander Course Curricula

The second method compared the issues addressed in Simuworld with those taught at Squadron Commander Courses in Air Education and Training Command, Air Combat Command, and Air Mobility Command. The purpose was to examine topics common to all three squadron commander courses and compare them to issues addressed in Simuworld. This was accomplished in an attempt to discover any major issues for squadron commanders omitted from Simuworld.

Squadron Commander Survey

Survey Development

Since the Simuworld program was quite in-depth (taking approximately three hours to complete), the challenge was to develop a survey that would gather data essential to the validation process without becoming so exhaustive as to cause the surveyed individuals to lose interest. Therefore, we structured the question formulation process closely around the research question: "Is the Squadron Commander Simuworld program an effective leadership tool for new squadron commanders and squadron commander candidates?"

Six desirable characteristics of a leadership education tool were selected for evaluation of Simuworld. Three of these were targeted as goals of the designers of Simuworld. The first was *realism* of the scenarios presented to the user. *Credibility* of the information and resources was the second characteristic, and *usefulness* to the squadron commander in his/her leadership development was the third.¹ Based on the requirements put forth by our research advisor, we evaluated three additional areas to

more fully accomplish the requested validation. We evaluated *completeness* to determine if the program omitted any vitally important issues facing commanders or resources available to aid in decision-making. We evaluated *functionality* because the material within the program is of no value if the user is unable to access it. Finally, *global utility* was deemed important to ensure the program was useful to commanders of all types of squadrons, and the scenarios were universally relevant.

With these characteristics in mind, we developed the survey items. Initially, the items came from pure brainstorming and “gut feel” of what questions were important to ask. Then, we evaluated each question against the six characteristics. If it did not address any of the desirable characteristics it was set aside. After this process was complete, we reassessed the questions originally discarded to determine if they addressed a topic important to the evaluation, but not listed among our six desirable characteristics. As a result of this, there was only one more “category” of questions—*suggestions for improvement*. Once we identified these questions, we reversed the process. We revisited each of the six characteristics to ensure that each was addressed in the survey. This process reinforced our contention that the survey was on target, and would produce the intended results. Appendix A provides a representation of the six characteristics, and which characteristics are targeted in each survey item.

Once we developed the content of the questions, formatting became the next hurdle. Ideally, a survey with the same formatting throughout is desirable, as it gives the participant a constant pattern around which to formulate his/her thoughts and opinions.² However, that was not feasible in this survey for two reasons. First, to evaluate the *global utility* characteristic we needed to identify discriminating characteristics between

the participants. These were established to determine if there were any specific groups among participants who found the program to be significantly more or less useful than the rest of the sample group. This required specific data to include the type of squadron the individual commanded, inclusive dates of command, personnel makeup of the squadron, etc. These data are most conducive to “fill in the blank” types of questions. In addition, due to the length and breadth of the program we felt that the individual survey items would likely bring comments to mind. If the comment section was limited to the end of the survey, we might have lost valuable data in the process. Therefore, we provided a space for comments after each question. The Simuworld program is rather large and complex, and to get into the “nuts and bolts” would take an extensive survey. Given our desire to keep the participants’ interest, the comment section allowed us to collect valuable data that would otherwise have to be painfully extracted through an exhaustive survey.

For the remaining questions, we selected the five point Likert scale, giving the respondents choices ranging from “strongly disagree” to “strongly agree” (see Appendix B for the final survey). To accomplish this, we transformed the questions into statements. We chose this method because we were soliciting opinions. The intensity of those opinions determined the participants’ approval of the program, and the Likert scale was one of the most common methods to achieve those results.³ One of the challenges of the Likert scale was to phrase all of the survey items in a manner that could be answered from “strongly agree” to “strongly disagree” and obtain the required data. For example, a statement related to the length of the program seems as simple as “The program was the correct length.” However, an answer of “strongly disagree” doesn’t tell the researcher if

the participant thought the program was too long or too short. Therefore, apparent repetition was occasionally necessary to extract the correct data.

Once the survey items were completed and formatted to accommodate the Likert scale, they were examined by experts within the Air University.⁴ The objective was to “fine tune” the instrument to better ensure the desired results could be obtained. The expertise proved invaluable with respect to pinpointing wording or subjectivity within the survey that was potentially confusing or misleading. The product of this examination was a survey instrument that was well structured and unambiguous.

We considered a pretest a valuable means to further refine the survey instrument. Survey research authors Converse and Presser agree, stating “Pretesting a survey questionnaire is always recommended—no text in survey methods would speak against such hallowed scientific advice.”⁵ In order to pretest the survey for quality of content, we conducted a pilot study prior to distributing the instrument to the participants. We randomly selected five participants from the sample population to accomplish the pilot study. These participants first completed the Simuworld program and then the survey. After they answered the questions, we solicited their comments with regards to the quality of the survey. We instructed the pilot survey participants that though evaluating the Simuworld program was important, they were to primarily focus on the survey and evaluate it as an acceptable instrument to collect necessary data for validating the Simuworld program. We did not provide specific questions for the pilot survey participants to answer with regards to the quality of the survey. However, we introduced a few issues (survey completeness, length, clarity) to give the pilot participants a point of debarkation for expressing opinions on the validity of the survey.

The results of the pilot survey were very positive. With the exception of a few minor word changes to make the instructions more readable, the survey survived the pilot study unscathed. These results combined with the exhaustive examination and approval cycle required by the evaluations department within the Air University produced a high level of confidence that the survey would collect the correct data for the validation process of the Simuworld program.

Sample Selection Method

The population for this survey was former USAF squadron commanders or current, experienced squadron commanders (more than one year in command). We arrived at this to ensure that the participants had sufficient experience to evaluate the overall life of a squadron commander. In his textbook on marketing research, Gilbert Churchill identified the this class of population as an *institutional* population. Based on this classification, he stated that historical studies of institutional populations have identified an appropriate sample size as between 50 and 200.⁶ Between the staff and students of Air War College and Air Command and Staff College, there were approximately 110 potential participants based on the aforementioned criteria.

We realized that sampling a specific element of the population, such as Intermediate and Senior Service School students and graduates, created a limitation in the area of "randomness." Attendees of these schools are competitively selected, which naturally discriminates and eliminates the possibility of pure random selection of participants. However, using these participants as the sample group provided a similar environment under which all participants could complete the program. All squadron commanders go through variations in workload throughout their command, as well as in follow-on

assignments. As workload varies, so does the time available to accomplish secondary projects such as the completion of a three to four hour computer program and survey. Though the workload between students and staff at the Air War College and Air Command and Staff College was not identical, the variability was greatly reduced from that of the overall population. This increase in homogeneity enhanced consistency of effort and reduced response variation based on time spent on the program.

The only guideline followed in selecting participants among the available 110 qualified personnel was "more is better." If every available participant accomplished the survey, the sample size would be right in the heart of the statistical envelope. The time investment necessary for completion of the program did not easily allow for this. Since the overall time required to accomplish the program and survey was initially estimated at approximately four hours, neither the Air War College nor the Air Command and Staff College faculty would sanction a mandatory participation. We accepted the risk of achieving 50% participation and meeting the minimum required sample size on a purely voluntary basis.

Administration

During the survey approval process, we sent requests for volunteers via electronic mail. Since the first request only yielded twenty-six volunteers, we repeated the process throughout the following three months. As soon as the survey was approved and the pilot study conducted, we instructed the first group of volunteers to accomplish the program and complete the survey. We placed the Simuworld program on the Internet through the Air University web site. Volunteers received an e-mail including the Internet address, username and password for entrance into the program. We asked them to complete the

program in the minimum time practical so as not to waste time reacquainting themselves with scenarios that may be forgotten over time. We instructed them to contact the research team after completing the program to obtain a survey. They would then complete the survey, and a member of the research team would either wait while they filled out the survey or pick it up soon after completion. This method accomplished two things. First, it prevented the participants from reading the survey first, and biasing the way they completed the program. For example, if the participant believed he/she had observed each of the areas required to fill out the survey after a few scenarios, some aspects of the program may not be evaluated, leaving us with incomplete data. Also, presenting the survey in person gave the research team the opportunity to briefly discuss anything the participant may desire and provide more valuable data for validating the Simuworld program. The research team member wrote any verbal comments on the back of the survey for inclusion into the "comments" section.

Notes

¹ Maj Steven J. Beatty, et al., "Squadron Commander Simuworld Technology Project Description," Research Paper AU/ACSC/0156/97-03, (Air University 1997), 4.

² This was the advice given by Dr. Abigail Gray, a Phd. working in the research department (DER) of Air Command and Staff College during an informal interview in November 1997.

³ Air University. *Air University Sampling and Survey Handbook* 1996, n.p., on-line, Internet, 2 February 1998, available from <http://www.au.af.mil/au/hq/selc/smpl-5.htm>.

⁴ Dr. Abigail Gray and Dr. Marlin Moore from the ACSC research department (DER) examined and critiqued the instrument. The survey was approved at the ACSC level by the ACSC evaluation department (CVV). In addition, Cheryl Monday, Air University Survey Control Officer inspected and approved the survey instrument.

⁵ *Survey Questions, Handcrafting the Standardized Questionnaire* (Sage Publications, Inc 1986) 51.

⁶ Jean M. Converse and Stanley Pressler, *Marketing Research, Methodological Foundations*, 6th ed. (The Dryden Press, 1995), 646.

Chapter 4

Results and Analysis

Advising Elements

Simuworld offered links to many various base agencies, but the links to the first sergeant and the Staff Judge Advocate were especially important. The first sergeant was critical, as he represented the key connection between the commander and the enlisted force. This is a realistic representation. The first sergeant is more aware of issues affecting enlisted people and has more experience to draw upon. In his book, *Commanding an Air Force Squadron*, Colonel Timmons, espouses “The first sergeant is vital, you must determine his or her effectiveness early on” as one of his “Proverbs for Command.”¹ The Staff Judge Advocate is also critical and as one of his/her primary missions “provide(s) legal services to his/her commander.”² Recent events including the Lieutenant Kelly Flynn case demonstrate the need for the commander to proceed in a correct legal manner in delicate situations.

One of the delicate situations the Simuworld commander faced was a senior noncommissioned officer (named “TSgt Blah”) who got into a fight with another enlisted person in the NCO club. This same NCO was arrested by the local police later in the week for an alcohol-related domestic dispute with his wife at his off-base residence. The first sergeant elected to handle the matter initially without involving the commander. The

fight occurred on Friday night and the first sergeant was initially notified early Saturday morning that TSgt Blah went to the emergency room for injuries sustained during a softball game. On Saturday afternoon, the first sergeant found out that TSgt Blah sustained the injuries from a fight at the NCO Club. It wasn't until Monday morning that the commander was informed as to the details of the event. Instruction at the First Sergeant Academy (FSA) supports this as a *possible* course of action given the situation. However, the FSA considers a better course of action would have been to inform the commander immediately and involve him/her in the process.³ It is unclear if the creators of Simuworld intentionally developed the scenario with a lack of positive first sergeant input. Doing so made the scenario more difficult for the Simuworld commander. This may have been designed into the scenario to demonstrate the importance of the squadron commander/first sergeant relationship in the smooth functioning of a squadron. This theory is supported by the fact that in the end of day analysis, the program asked the user the question "What could the first sergeant have done better in the situation?" Regardless, the FSA determined a more realistic approach would have been for increased first sergeant involvement.

Concerning the same incidents involving TSgt Blah, the advice from the Staff Judge Advocate (SJA) was more definitive than that of the first sergeant. The rules of the Uniform Code of Military Justice (UCMJ) and Air Force Instructions (AFI) are very clear as how to proceed in these types of situations. What makes the first TSgt Blah incident somewhat difficult is that neither NCO is willing to press charges nor can it be determined who started the fight. That allowed TSgt Blah to use self-defense as a possible cause for the fight. However, given these circumstances, the SJA in Simuworld

voices all the options available to the commander and the AFIs that apply. This is in accordance with the advice given by the Judge Advocates General School (JAGS). The subsequent incident with TSgt Blah again involved advice from the SJA concerning the options available to the commander and possible courses of action. Again, the advice from the Simuworld SJA agreed with what the JAG School states is current with the UCMJ and the AFIs.⁴

Squadron Commander Course Curricula

The following table presents the results of the correlation evaluation conducted to compare topics taught at formal squadron commander courses to scenarios presented in Simuworld.

Table 1. Simuworld Scenario–Commander Course Curricula Correlation

| Common Squadron Commander Course Curriculum Topics | Simuworld Scenarios |
|--|---------------------|
| Accountability, values, and ethics | X |
| Security Forces | X |
| Office of Special Investigations | |
| The commander and law and judicial issues | X |
| Public Affairs | |
| Family/Individual Support | X |
| Individual Financial Management | |
| Facilities | X |
| The Inspector General and Squadron Readiness | |
| C4 Systems | |
| Civilian Personnel | X |
| Assignment Process | X |
| Officer Promotion System | X |
| Evaluation Systems | X |
| Education and Training | |
| Enlisted Professional Development | |
| First Sergeant | X |
| Safety | X |

The designers of Simuworld did not create the program to take the place of a formal squadron commander course. However, a comparison of the topics studied at formal commander schools and issues addressed in Simuworld indicates strong correlation. Though there were more items in the individual curricula of AETC, ACC, and AMC squadron commander courses (see Appendix C), those listed in Table 1 are topics common to all three. Over 60% of the common topics of the curricula are *directly* addressed in Simuworld. Further analysis indicates that several topics on the curricula are not conducive to scenario-based learning. Some subjects such as C4 systems, education and training and enlisted professional development would require such an expanded scenario to adequately address the topic that a hypothetical week would not be sufficient.

The correlation between the curricula and Simuworld illustrates the usefulness of the program for prospective commanders unable to attend the formal course prior to assuming command. Because the average squadron commander course is a five-day event with eight hours of instruction, it covers a wider area of topics than Simuworld. However, the correlation indicates commonality between Simuworld issues and the focus of the curricula of instruction for future squadron commanders.

Commander Survey

Since the evaluation criteria for validating the Simuworld program centered around six desirable characteristics of a leadership education tool, the analysis of the results will be broken down into those same six characteristics: *realism, usefulness, credibility, completeness, functionality and global utility*. We analyzed these major areas to determine the strongest and weakest areas of the program. We then broke down each

area as necessary to identify any specific aspects of the program that were found to be outstanding in any way. These sub-areas were determined by comments associated with responses to individual questions. The credibility of the advice given in the scenarios has been addressed by the results of the advising elements evaluations. With respect to the survey instrument, we addressed the credibility of the program as a whole in terms of realism, and those two characteristics were grouped as a single area of analysis.

Because the style of answers were word representations of opinions, we broke those down into numerical terms to better analyze the data. We assigned the five responses ranging from “strongly disagree” to “strongly agree” numerical values of -2, -1, 0, 1, 2, respectively. This allowed us to compute a mean and standard deviation. The standard deviation speaks to the validity of the responses and quality of the question. For example, a response with an average value of 1 (“agree”) with a small standard deviation indicates a preponderance of “agree” responses. A large standard deviation indicates various responses throughout the spectrum and does not adequately represent a consensus. This infers that the question does not aid in validating or discrediting the Simuworld program, and therefore is of little value.

For purposes of analysis, we assumed a normal distribution curve. Therefore, one standard deviation is +/- 34.15% of the mean. The second standard deviation is an additional 13.6% from the mean.⁵ With two exceptions, discussed in the *functionality* section of this analysis, a high mean average number (maximum of +2) indicates stronger agreement with the questions, and a greater indication of the desirable characteristic being evaluated. We examined the characteristics independently, and present them individually. In each of the supporting tables, the column titled “Sub-area” displays the

survey item number for correlation with the survey (Appendix B), and a concise, paraphrased version of each survey item. We analyzed written comments to clarify and support the statistical data. Appendix D presents the transcribed comments from the survey instruments.

Overall Results

Table 2 presents the summary of the evaluations of each of the realism, credibility, completeness, usefulness and functionality characteristics. Global utility will be addressed in a different format. This table provides a top-level view of the results of each evaluation, which will be presented individually in more depth.

Table 2. Overall Results

| CHARACTERISTIC | MEAN (X) | STD DEV (σ) |
|-------------------------|----------|----------------------|
| Realism and Credibility | 1.31 | 0.72 |
| Usefulness | 1.33 | 0.75 |
| Completeness | 1.09 | 0.74 |
| Functionality | 1.07 | 0.75 |

Realism and Credibility

This segment of the survey compared resources and scenarios presented in Simuworld to those experienced by the participants during their command.

Table 3. Realism and Credibility Evaluation

| SURVEY SUB-AREA | MEAN (X) | STD DEV (σ) |
|---|----------|----------------------|
| (15) I have used resources in Simuworld in my experience | 1.46 | 0.54 |
| (16) The scenarios are representative of my experience | 1.32 | 0.77 |
| (17) The scenarios represented some of the most difficult challenges in my experience | 1.14 | 0.83 |
| TOTAL | 1.31 | 0.72 |

These results show that the participants found the resources and scenarios realistic. The resources received a more positive response than the scenarios. This is indicative of the wide variety of experiences represented by the participants and the impossibility of capturing all the challenges faced by a squadron commander. However, the average overall response of 1.31 (between “agree” and “strongly agree”) indicates that the Simuworld program is perceived to be real and credible by the participants. Item number (15) received the highest rating on the survey. The normal distribution assumes that half of the respondents answered at least 1.31. By subtracting one standard deviation of 0.72 from the mean and still obtaining a positive number (+0.59), statistically at least 85% of the participants responded positively to the realism and credibility aspect of Simuworld. The raw data support this, with 94% of the possible responses to the three questions being either “agree” or “strongly agree.” Written comments also support this data. Fifty-eight percent of the respondents identified the realism of the scenarios and information as one of the greatest strengths of the program.

Although no survey item directly addressed the performance and advice of the first sergeant in the program, 10% of the participants identified that aspect as detracting from the realism of Simuworld. Within the program, these respondents suggested that the first sergeant was not proactive, and was detrimental to the commander. This was not addressed in the program, and its omission from the analyses was seen as unrealistic. These results matched the inputs from the First Sergeant Academy discussed earlier in this paper.

Usefulness

This segment evaluated the usefulness of the information within the scenarios. In addition, it addressed the usefulness of the overall program to new squadron commanders and those preparing to assume command.

Table 4. Usefulness Evaluation

| SURVEY SUB-AREA | MEAN (\bar{X}) | STD DEV (σ) |
|---|-----------------------|-------------------------|
| (13) The resource "hot links" were useful in decision making | 1.4 | 0.53 |
| (18) Simuworld would have benefited me as a new commander | 1.3 | 0.74 |
| (19) I recommend Simuworld be a part of squadron commander curricula | 1.3 | 0.81 |
| (20) I recommend Simuworld for those who do not attend a formal squadron commander course | 1.3 | 0.91 |
| TOTAL | 1.33 | 0.75 |

The links to resources available for the squadron commander throughout the scenarios (survey item (13)) was the third highest rated item on the survey. Seventeen percent of those who commented on this survey item singled out the resource links as the best part of the program. Out of all possible responses in the usefulness category, 98% were either "agree" or "strongly agree." Survey item (20) was the only item in which there was sporadic confusion on its intent. Of the 12% who did not respond positively to the survey item, two thirds emphasized the need for attending a formal squadron commander school, implying that they understood the survey item to be assessing the program's validity as a *replacement* for formal training. This did not significantly diminish the overall validation of the "usefulness" characteristic.

Completeness

The survey instrument addressed two aspects of the completeness of the Simuworld program. The first aspect was the completeness of the information within the scenarios. The second was designed to work in concert with the squadron commander curricula investigation to determine if there were any major issues not included in the scenarios.

Table 5. Completeness Evaluation

| SURVEY SUB-AREA | MEAN (\bar{X}) | STD DEV (σ) |
|---|-----------------------|-------------------------|
| (14) Each scenario contained sufficient information to make an informed decision | 1.04 | 0.64 |
| (17) The scenarios represented some of the most difficult challenges in my experience | 1.14 | 0.83 |
| TOTAL | 1.09 | 0.74 |

Though item (14) received one of the lowest overall ratings, there were very few negative comments, and the average response was slightly above “agree.” Comments associated with that item predominantly expressed the opinion that the information was adequate, but a commander could always use more.

We designed survey item (17) specifically to spur thought by the participants and determine what significant challenges to squadron commanders were omitted from the program. This accomplished two things. First, if a significant percentage of the sample identified a particular scenario that was not included in the program, we would recommend a reprioritization or addition of that scenario *prior* to validation of the program. Secondly, the responses provide a direction for any group in the future who may wish to expand the program. There was no single potential scenario that was identified by more than four percent of the participants, indicating that there was no immediate need to include further scenarios prior to validating the program. There were,

however, several additional suggested scenarios which we list to serve as a springboard for any attempts to broaden Simuworlde: Among suggested topics for further scenarios were suicide, AWOL, financial management problems, IG inspection preparation, and punishment decisions (Article 15, Letter of Reprimand, etc).

Functionality

The primary emphasis of this section was to determine if there were any detracting elements within the use of the program that may have degraded its effectiveness as a leadership tool. Two items relating to the length of the program are also included in the table below, but are not included in the “total” row of the mean and standard deviation. They were deleted because for these two questions, the closer the averages were to the maximum response (+2) the more the participants felt the program length needed to be changed. This contradicts the patterns of the rest of the program, so the analysis of program length was accomplished separately.

Table 6. Functionality Evaluation

| SURVEY SUB-AREA | MEAN (X) | STD DEV (σ) |
|---|----------|-------------|
| (7) The “hot links” were easy to access | 1.44 | 0.61 |
| (8) Ability to reference information from one “day” to another was adequate | 1 | 0.76 |
| (9) The “Navigation Tips” section simplified navigation through the program | 0.84 | 0.77 |
| (10) The program should be increased in length* | -0.48 | 0.97 |
| (11) The program should be decreased in length* | -0.62 | 0.75 |
| (12) Overall, I found navigation user-friendly | 0.98 | 0.84 |
| TOTAL | 1.07 | 0.75 |

*Not included in TOTAL calculation.

Overall, functionality received the least positive response of the characteristics evaluated. Though the overall average is above an “agree” response, those results are

skewed by survey item (7). Item (7) received the second highest response on the survey, indicating that the functionality of the links to resources for the participants was very good. However, the navigation throughout the program did not rate as well, receiving an overall rating response below “agree.”

The data show that an improvement to the accessibility and/or usability of the instructions in the “Navigation Tips” portion of the program would be beneficial. The key data analyzed were the comments associated with the negative remarks throughout this section. The majority of the negative responses were associated with difficulties navigating from Simuworld “day” to “day.” With the exception of difficulties due to computers “locking up,” each of the problems encountered by the users was addressed in the “Navigation Tips” portion of the program. In addition, when the test team gave out general directions to the participants, we recommended the “Navigation Tips” section as the instructional key to maneuvering through the program. Despite this, there were several complaints about the lack of information available for navigating through the daily schedules.

Several of the respondents commented that it was unclear that the program was not interactive. Some attempted to answer questions raised in the scenarios and were unable to do so. These comments were supported by feedback from participants during completion of the program. The research team received requests from 10% of the participants during accomplishment of Simuworld asking how to input information and feedback, not realizing the program was “read only.”

Another area that was identified as detracting was the Unit Manning Documents (UMDs) that were available on each main character involved in the scenarios. These

files contained information on funded and unfunded manpower requirements within the squadron. The text was identified as unreadable or unusable. We had noted this discrepancy upon our initial inspection of the program. There was no feedback from the participants that the lack of usability of the UMD had any bearing on the value of the program.

The length of the program was appropriate, according to the data. Both survey items proposing to change the length of the program were met with predominantly negative responses. Of the two suggestions, increasing the length of the program was more favored. Sixteen percent of the respondents believed the program should be increased in length, while only six percent believed it should be shortened.

Although functionality was the lowest rated category, the data do not suggest any other specific needs or directions for improvement other than the navigation through the program. In each of the three survey items pertaining to navigation and user-friendliness (8, 9, 12), less than 10% of the responses were negative. Among the comments associated with the negative responses, there was no common theme other than the need for clarity in the instructions. Comments ranged from dislike of the color scheme to frustration with and slow program response time. Without further investigation, it is difficult to determine if any of the problems are resident within the software or simply a function of the computer on which the program was being accessed. The comments are useful in that they may be a valid source for further refinement of the instrument, but do not significantly impact the validation of the Simuworld program.

Global Utility

Global utility implies that the program is relatively equally applicable to all potential and new squadron commanders, regardless of the size or type of squadron, or the commander's background. Identification of sub-groups within the sample group whose opinions differed greatly from the rest of the participants was key to assessing the global utility of the Simuworld program. We collected data in the first five survey items (See Appendix B) for the purpose of developing discriminating categories. From this information, four different sub-groups were used for comparison. The mean average and standard deviation to each of the survey items was compared among the sub-groups to identify disparities. Squadron size was the first sub-group, and was divided into small (100 or less), medium (101 – 300), and large (over 300). Squadron makeup was divided into three categories based on the preponderance of personnel being officer, enlisted or civilian. Long-term relevance was examined by categorizing participants according to the most recent year of their command. Finally, attendance of a formal school was used as a discriminating category in search of partial utility. As mentioned in the limitations section of this paper, comparison by squadron function was not feasible due to the limited sample size.

Within each of the four categories, we compared the participants' responses associated with the desirable characteristics used to validate the Simuworld program. Significant variances in the answers within different categories on a given characteristic is an indication of more or less acceptance by a particular sub-group, and reduces the global utility of the program. Table 7 summarizes our results.

Table 7. Global Utility Evaluation

| MEAN AVERAGE OF CHARACTERISTIC | CATEGORY | | | | | | | | | | |
|---|---------------|---------|------|-------------------------------|----------|----------|--------------------------------|-------|-------|-------------------|------|
| | Squadron Size | | | Squadron Makeup (Majority) | | | Most Recent Year in Command | | | Formal School? | |
| | <100 | 100-300 | ≥300 | Officer | Enlisted | Civilian | '93 & previous | 94/95 | 96/97 | Yes | No |
| Realism and Credibility | 1.21 | 1.29 | 1.43 | 1.8 | 1.26 | 1.19 | 1.17 | 0.91 | 1.53 | 1.37 | 1.18 |
| Usefulness | 1.37 | 1.25 | 1.38 | 1.85 | 1.29 | 1.25 | 1.32 | 1.18 | 1.36 | 1.30 | 1.37 |
| Completeness | 1.1 | 1.03 | 1.35 | 1.6 | 1.11 | 0.84 | 0.94 | 0.87 | 1.23 | 1.14 | 1.0 |
| Functionality | 1.22 | 0.99 | 0.95 | 1.5 | 0.97 | 1.09 | 0.94 | 0.89 | 1.18 | 0.98 | 1.24 |
| TOTAL | 1.23 | 1.14 | 1.28 | 1.69 | 1.16 | 1.09 | 1.09 | 0.96 | 1.33 | 1.20 | 1.20 |

Overall, the results were consistent throughout the various categories. The greatest difference occurred within the “squadron makeup” category. The commanders with officers as the majority of personnel rated the program significantly higher. The value of this finding is not statistically significant, as the sample size was prohibitively small (five participants). However, if it is representative of the population, a possible explanation for this phenomenon lies in the fact that the officer corps usually represents an older, more mature force whose squadron commander is not confronted with the same types of scenarios presented in Simuworld.

The other significant deviation occurred within the “most recent year commanded” category in the ‘94/’95 year group. Closer analysis reveals that this is a result of a limited sample size. There were 11 participants within the ‘94/’95 year group. Among them was a respondent whose experience was vastly different from all others participating in the survey. The overall survey score of this participant was four standard deviations from the mean. This significant difference, coupled with the limited sample in the group greatly skewed the results.

With these two exceptions, there were no significant trends indicating any disparities between the sub-groups evaluated. Written comments also indicated no trends within any

of the categories. Because the two exceptions are explained by rationale outside the scope of the Simuworld program, the global utility of the program is very strong.

General Comments

We also examined the written comments to investigate any common themes not addressed within the evaluations of the desirable characteristics. From this evaluation, three major suggestions for improvement evolved with one central theme: expansion. The first suggestion involved expanding the program to include more scenarios. Twenty percent of the respondents submitted comments of this nature. They suggested that the program was very worthwhile, and improvement could best be achieved by increasing exposure to prospective squadron commanders. The specific scenarios suggested are listed in the evaluation of completeness in this chapter.

Twelve percent of the participants also commented that there would be significant value added if the program were integrated into a group discussion format. This would allow feedback and an opportunity to learn from the experience of others. Suggested options included completing Simuworld a "day" at a time as part of the formal squadron commander curricula, while stopping in between to discuss the various scenarios with other students and faculty.

The third suggestion addressed introducing interactivity into the program. Ten percent of the participants recommended this course of action. This would provide more immediate feedback as to the consequences of specific decisions. In addition, it would increase the realism, and give the user some experience in "juggling" the schedule. One suggested area for interactivity was to allow the commander to proceed down a path to a

final decision on a given scenario. At the conclusion of the given scenario, the participant could learn the consequence of each of the decision branches along the way.

Each of the suggestions for improvement has merit. The fact that the theme among all three was expansion shows that Simuworld was perceived, at a minimum, as a program focused in the right direction. The first two suggestions are feasible, and within the scope of the Simuworld format. Expanding the program into an interactive tool would involve a massive increase in level of effort and change in program design philosophy.

Notes

¹ Col Timothy T. Timmons, *Commanding an Air Force Squadron* (Air University Press, 1993) 54.

² Col Jack L Rives, et al., *The Military Commander and the Law* (AFJAGS Press, 1996) 1.

³ Based on an interview with SMSgt Lane, Vice Commandant, First Sergeant Academy in January 1998. SMSgt Lane has ten years experience as a 1st sergeant.

⁴ Analysis of the scenarios was conducted by Lt Col Burman, Chief Military Justice, Judge Advocate General School. Interview was conducted in January 1998.

⁵ Gilbert Churchill, *Statistics and Measurement, An Introduction for MBTI Users*, 2nd ed. (Zeisset Associates, Inc., 1996) 11.

Chapter 5

Conclusions and Recommendations

Conclusions

This evaluation of the Simuworld program has adequately addressed the research question posed in this paper: "Is the Squadron Commander Simuworld computer program an effective leadership tool for new squadron commanders and squadron commander candidates?" The answer is "Yes."

The advising elements of the JAG School and First Sergeant Academy (FSA) examined the advice given to the Simuworld commander within the context of the program. Though the FSA felt a more ideal situation would involve a more proactive first sergeant, they admitted that the Simuworld first sergeant was not prohibitively unrealistic. The advising elements validated all other advice given in the scenarios without caveat.

The scenarios presented in Simuworld were representative of topics within the curricula of various formal squadron commander schools. Since the formal courses encompass much more time, it stands to reason that not all of the topics will be covered in the Simuworld program. However, the correlation of over 60% of the topics common among formal courses and Simuworld speaks well of the program. In addition, the

majority of the remaining topics instructed in the schools are not easily adapted into scenario-based instruction.

The survey completed by former squadron commanders provided the vast majority of the in-depth analysis required for validation of the Simuworld program. The results were unambiguous. The relatively small standard deviations increased confidence that even though the sample size was at the low end of the acceptable spectrum for statistical significance, the data quality was high. We were able to easily identify trends and common themes presented by the comments.

We evaluated the desirable characteristics that were the given as the yardstick by which to measure the program's effectiveness. Simuworld exhibited these characteristics in convincing fashion according to those who have experienced the squadron commander position. The strongest areas were realism, credibility and usefulness. Functionality and completeness obtained the lowest ratings, but were still positively received.

Recommendations

As a valid leadership tool for new squadron commanders and squadron commander candidates, the research team recommends the continued and expanded use of the "Squadron Commander Simuworld" program. The experts have spoken and the results are overwhelmingly positive.

We recommend the Simuworld program be incorporated into the squadron commander course curricula throughout the Air Force. In addition, we recommend it be made available for any commander unable to attend a formal course. The program should not be proposed as a substitute for those who have the opportunity to attend formal school, but would best be utilized in a supporting role for existing instruction. We

recommend the program be conducted in concert with group discussions to enhance the scenario-based learning through exposure to a breadth of experience.

Based on feedback from the FSA and former squadron commander comments, we recommend any changes to the program include a more proactive, supportive first sergeant character. This would benefit the realism and credibility aspect of the program and reinforce the concepts taught at the FSA.

We recommend the "Navigation Tips" be given a more prominent place on the main page. This may be done by making the page an entry link that the user is required to read to access the program. The data show that even though the information was available, it was occasionally not accessed, resulting in difficulty navigating through the program.

We recommend the Unit Manning Document resource link be eliminated from the scenarios. There was no data to indicate any usefulness of this information in decision-making and several comments alluded to the resource's lack of readability.

We recommend expanding the program to include more scenarios. Suggestions such as suicide, AWOL, financial management problems, IG inspection preparation, and punishment decisions (Article 15, Letter of Reprimand, etc) and comments in Appendix D provide a point of debarkation for further scenario development.

We recommend further research be accomplished to better pinpoint the scenarios which will most contribute to the effectiveness of the Simuworld program. Some areas have been suggested, but since the main thrust of this project was to validate the program, we did not fully flush out all of the specifics involved with directly improving the product. A focused research effort on this subject could potentially reap great benefits toward improving Simuworld's effectiveness.

Appendix A

Road Map for Simuworld Validation Survey

RESEARCH PROJECT 98-004

OBJECTIVE: Validate the Simuworld program as an effective tool for squadron commanders through three steps. The first step uses a survey given to previous squadron commanders to validate the content and usefulness of Simuworld. The second step verifies that the advice given in Simuworld coincides with that recommended by authoritative experts in a certain field such as Legal or Social Actions. The final step is a comparison between the content of Simuworld and the curriculum at the various squadron commander's schools. This is to compare the focus and scope between Simuworld and the commander schools.

After each question in the survey, a number in parentheses is given to show what issue the question addresses from the list above. There will be room after each question for comments related to that question along with a block at the end for other comments and suggestions for improvement.

The following issues will be addressed by the survey:

1. *REALISM* -Relevance of Simuworld issues to "Real world". (15, 16, 17)
2. *CREDIBILITY* - Are the issues addressed representative of those in a typical week faced by a squadron commander? (16, 17)
3. *USEFULNESS* - Appropriateness of resources available in Simuworld Program. (Were they the right ones?) (13) Usefulness of the entire program in a commander's leadership development. (18, 19, 20)
4. *COMPLETENESS* - of resources available in Simuworld Program. (Were any valid resources not available?) (14) Completeness of major issues addressed in Simuworld. (Any important issues missing?) (17)
5. *FUNCTIONALITY* - Ease of use of the program. (7, 8, 9, 10, 11, 12)
6. *GLOBAL UTILITY* - Global utility of Simuworld. (Is it more applicable to some squadrons than others? If so, what are the distinctions—size, makeup, mission?) (1, 2, 3, 4, 5)
7. Suggestions for improvement. (21, 22, 23)

Appendix B

Simuworld Survey Instrument

This survey solicits your observations of the Simuworld Squadron Commander Program. *You should be able to complete the survey in 10 minutes.*

SECTION I: BACKGROUND

Please fill in the blanks with the most accurate response.

1. The most recent squadron I commanded consisted of approximately _____ personnel.
2. The approximate makeup of my squadron was ____% officer, ____% enlisted, ____ % civilian.
3. I commanded my squadron from approximately ____ (mo), 19____ to ____ (mo), 19____.
4. The type of squadron I commanded was:

| | | |
|------------------------|-------------------------|---------------------|
| ____operational flying | ____operational support | ____communications |
| ____maintenance | ____logistics | ____security police |
| ____services | ____civil engineering | ____other:_____ |
5. I have attended a formal squadron commander school. ____yes ____no
6. I completed the Simuworld computer program in approximately _____ hours.

NOTE: The remaining questions have space for comments. The comments after the questions are not *required*, but may be helpful in better describing your opinion. There is room at the end of the survey for general comments.

For the remaining questions, please use the following scale.

SD – Strongly Disagree; D – Disagree; N – Neutral; A – Agree; SA – Strongly Agree

SECTION II: PROGRAM FUNCTIONALITY

7. The "hot links" to resources were easy to access. **SD D N A SA**
Comments: _____
8. The Simuworld program ability to reference information from one day to another was adequate. **SD D N A SA**
Comments: _____
9. The "Navigation Tips" in the index simplified navigation through the Simuworld program. **SD D N A SA**
Comments: _____

10. The Simuworld program should be increased in length. SD D N A SA
 Comments: _____
11. The Simuworld program should be decreased in length. SD D N A SA
 Comments: _____
12. Overall, I found navigation through the Simuworld program user-friendly. SD D N A SA
 Comments: _____

SECTION III: REALISM, USEFULNESS, AND CREDIBILITY

13. The "hot links" to resources (JAG, orderly room, MPF, etc) available were useful in decision making. SD D N A SA
 Comments: _____
14. There was sufficient information in each scenario to make an informed decision. SD D N A SA
 Comments: _____
15. As a squadron commander, I have used the same resources available in the resource "hot links" in similar situations. SD D N A SA
 Comments: _____
16. The scenarios presented in the Simuworld program are representative of situations I have encountered as a squadron commander. SD D N A SA
 Comments: _____
17. Overall, the scenarios presented in the Simuworld program represented some of the most difficult challenges facing squadron commanders. SD D N A SA
 Comments: _____
18. The Simuworld program would have been beneficial to me as a new squadron commander. SD D N A SA
 Comments: _____
19. I recommend the Simuworld program be a part of squadron commander course curricula. SD D N A SA
 Comments: _____
20. I recommend squadron commanders who do not attend a formal squadron commander school complete the Simuworld program. SD D N A SA
 Comments: _____

SECTION IV: COMMENTS

Given the wide variety of topics covered in Simuworld, and the limited scope of this survey, this section is **extremely important**. Please provide comments in the following areas:

21. What were the greatest strengths of the Simuworld program?
22. What were the greatest weaknesses of the Simuworld program?
23. What are your suggestions for improvement?

Appendix C

Squadron Commander Course Curricula

Air Mobility Command

COMMANDERS' AGENDA AMC PRE-COMMAND TRAINING COURSE

Monday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|--|------------------|------------|-------------------|
| 0645 | Trans from Lodging to HQ AMC | | 375 AW | |
| 0700-0730 | Continental Breakfast | | DSR | Hospitality Suite |
| 0730-0745 | Welcome Remarks | Lt Col Wesselman | DS | MCR |
| 0745-0805 | Thoughts on Mentoring/Intro of Attendees | Brig Gen Regan | JA | MCR |
| 0805-0905 | Leadership Accountability | Brig Gen Regan | JA | MCR |
| 0905-0915 | Break | | DSR | Hospitality Suite |
| 0915-0925 | Admin Remarks | Maj Williams | DSR | MCR |
| 0925-1010 | Safety | Col Lowe | SE | MCR |
| 1010-1015 | Break | | | |
| 1015-1100 | Senior Enlisted Advisor | CMSgt Penrod | 375 AW | MCR |
| 1100-1105 | Transportation to Dining Facility | | 375 AW | |
| 1105-1155 | Lunch at Dining Facility | | 375 AW | Dinning Facility |
| 1155-1200 | Transportation to HQ AMC | | 375 AW | |
| 1200-1300 | Staff Interaction Time | | | |
| 1300- 1330 | Year Of The Enlisted Force | | CCX | MCR |
| | | <i>Col Berry</i> | | |
| 1330-1415 | Organizational Culture | Lt Col Ross | CCX | MCR |
| 1415-1430 | Break | | DSR | Hospitality Suite |
| 1430-1530 | Communications and Computers | Col Brumm | SC | MCR |
| 1530-1545 | Break | | DSR | Hospitality Suite |
| 1545-1645 | TACC Orientation and Tour | Brig Gen McNabb | TACC | TACC |
| 1645-1800 | Icebreaker | | DSR | Hospitality Suite |

Tuesday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|-----------------------------------|------------------|------------|-------------------|
| 0700-0730 | Continental Breakfast | | DSR | Hospitality Suite |
| 0730-0800 | Director's Comments | Col Fitzhugh | DP | MCR |
| 0800-0805 | Break | | | |
| 0805-0905 | Quality Force | Lt Col Eccleston | DP | MCR |
| 0905-0930 | Break | | DSR | Hospitality Suite |
| 0930-1215 | Enlisted Professional Development | SMSgt Tomkins | DP | MCR |
| 1215-1310 | Lunch at Leisure | | | |
| 1310-1400 | Civilian Personnel Issues | Mr. Baxter | DP | MCR |
| 1400-1405 | Break | | | |
| 1405-1520 | Assignment Info/OPD | Col Knowlton | DP | MCR |
| 1520-1530 | Break | | DSR | Hospitality Suite |
| 1530-1645 | Rater Responsibilities | Lt Col Eccleston | DP | MCR |
| 1645-1700 | Mentor Remarks | Col Fitzhugh | | |
| 1700- | Evening at Leisure | | | |

Wednesday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|---------------------------|-----------------|------------|-------------------|
| 0700-0730 | Continental Breakfast | | DSR | Hospitality Suite |
| 0730-0745 | Mentor Remarks | Brig Gen Becker | IG | MCR |
| 0745-0830 | Force Protection | Col Matarazzo | SF | MCR |
| 0830-0840 | Break | | DSR | Hospitality Suite |
| 0840-0920 | OSI | Lt Col Broeking | 3FIR | MCR |
| 0920-0930 | Break | | DSR | Hospitality Suite |
| 0930-1015 | Threat Working Group | Lt Col Sowdon | IN | MCR |
| 1015-1030 | Break | | DSR | Hospitality Suite |
| 1030-1130 | Quality | Col Johnson | XP | MCR |
| 1130-1315 | Lunch at Leisure | | | |
| 1315-1415 | Change Management | Ms. Murray | DP | MCR |
| 1415-1430 | Break | | DSR | Hospitality Suite |
| 1430-1530 | Leadership Accountability | Brig Gen Regan | JA | MCR |
| 1530-1630 | IG and SQ Readiness | Brig Gen Becker | IG | MCR |
| 1630- | Evening at Leisure | | | |

Thursday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|--|---|----------------|-------------------|
| 0700-0730 | Continental Breakfast | | DSR | Hospitality Suite |
| 0730-0930 | The Commander, the Law, and Judicial Issues | Col Chappell Lt Col Doogan Lt Col Hillyer | JA JA JA | MCR |
| 0930-0945 | Break | | DSR | Hospitality Suite |
| 0945-1100 | The Commander, the Law, and Judicial Issues (cont'd) | | JA | MCR |
| 1100-1300 | Lunch at Leisure | | | |
| 1300-1500 | Judicial Case Studies | Col Strand | JA | MCR |
| 1500-1515 | Break | | | |
| 1515-1615 | Financial Management for CC's | Lt Col Virost | FM | MCR |
| 1615-1630 | Mentor Remarks | Brig Gen McNabb | TACC | MCR |
| 1630 | Evening at Leisure | | | |

Friday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|-----------------------|---|------------|-----------------|
| 0700-0730 | Continental Breakfast | | DSR | MCR |
| 0730-0825 | Public Affairs | Col Cox | PA | MCR |
| 0825-0835 | Break | | | MCR |
| 0835-0930 | Contracting | Col Cantwell | LG | MCR |
| 0930-0945 | Break | | DSR | MCR |
| 0945-1040 | Manpower | Col Manuel | XP | MCR |
| 1040-1050 | Break | | | MCR |
| 1050-1135 | Keynote Address | Lt Gen Sams | CV | MCR |
| 1135-1300 | Lunch at Leisure | | | |
| 1300-1330 | Deployment Operations | Lt Col Strang | LG | MCR |
| 1330-1400 | Readiness Reporting | Col Bible | DO | MCR |
| 1400-1415 | Break | | DSR | MCR |
| 1415-1515 | Squadron CC Panel | Lt Col Freeman Lt Col Bomberger Lt Col Welenc Lt Col Bible Maj Cheyne Maj Gray | 375 AW | MCR |
| 1515-1525 | Break | | | |
| 1525-1615 | Commander's Programs | Lt Col Malcomb | CCQ | MCR |
| 1615-1630 | Mentor Remarks | Col (Brig Gen Select) Jones | SC | MCR |
| 1630 | Evening at Leisure | | | |

Monday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|---|----------------------------|------------|-------------------|
| 0730-0800 | Continental Breakfast* | | DSR | MCR |
| 0800-0810 | Welcome Spouses/Introduce Spouses and Spouse Panel Members* | Maj Williams | DSR | MCR |
| 0810-0830 | Mentor Remarks* | Brig Gen Stowell | CE | MCR |
| 0830-0840 | Command Presentations* | Maj Williams | DSR | MCR |
| 0840-0940 | Individual and Family Support* | Lt Col Smith Ms. Murray | SG DP | MCR |
| 0940-0955 | Break* | | DSR | Hospitality Suite |
| 0955-1145 | Individual and Family Support (cont'd)* | Lt Col Smith Ms. Murray | SG DP | MCR |
| 1145-1300 | Lunch at Leisure* | | | |
| 1300-1345 | Housing Issues* | Mr. Bosse | CE | MCR |
| 1345-1400 | Break* | | DSR | Hospitality Suite |
| 1400-1500 | Facility Programs | Col Love | CE | MCR |
| 1500-1505 | Break | | DSR | Hospitality Suite |
| 1505-1545 | ECAMP/Environmental Issues | Col Dirosario | CE | MCR |
| 1545-1600 | Mentor Remarks | Brig Gen Stowell | CE | MCR |
| 1600-1700 | Icebreaker | | DSR | Hospitality Suite |
| 1700- | Evening at Leisure* | | | |

Tuesday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|--|------------------|------------|-----------------|
| 0715-0745 | Continental Breakfast* | | DSR | GRPC |
| 0745-0800 | Admin Remarks* | Maj Williams | DSR | GRPC |
| 0800-0845 | Executive Session* | Lt Gen Sams | CV | GRPC |
| 0845-0850 | Break* | | | GRPC |
| 0850-1020 | Leadership Case Study | Maj Gen Voellger | DO | GRPC |
| 1020-1025 | Break | | | GRPC |
| 1025-1125 | Protocol | Lt Col Benson | CCP | GRPC |
| 1125-1300 | Lunch at leisure* | | | |
| 1300-1350 | Decision Making and Conflict Resolution* | Ms. Williams | USTC/QI | GRPC |
| 1350-1405 | Break* | | | |
| 1405-1455 | Time Management | Ms. Williams | USTC/QI | GRPC |
| 1455-1510 | Break* | | | |
| 1510-1530 | Mentor Remarks * | Maj Gen Floyd | LG | GRPC |
| 1530-1830 | Prep for Dinner * | | | |

Wednesday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|--|------------------|------------|-----------------|
| 0700-0730 | Continental Breakfast* | | DSR | GRPC |
| 0730-0900 | Casualties and the Air Force Family* | Lt Col Eccleston | DP | GRPC |
| | | Mr. Vaughn | SV | |
| | | Maj Reed | HC | |
| | | Lt Col Smith | SG | |
| | | Lt Col Hinger | 13 AS/CC | |
| 0900-0915 | Break* | | DSR | GRPC |
| 0915-1030 | Casualties and the Air Force Family (cont'd) | | | GRPC |
| 1030-1040 | Break* | | DSR | GRPC |
| 1040-1130 | Suicide Prevention* | Lt Col Smith | SG | |
| 1130-1300 | Lunch at leisure | | | |
| 1300-1500 | First Sergeants Panel | MSgt PlesKovitch | 375 AW | GRPC |
| 1500-1515 | Break* | | DSR | GRPC |
| 1515-1545 | First Sergeants Panel (cont'd) | | | GRPC |
| 1545-1550 | Break | | | |
| 1550-1645 | Services | Col Smallheer | SV | GRPC |
| 1645-1700 | Mentor Remarks | Maj Gen Voellger | DO | GRPC |
| 1700- | Evening at Leisure* | | | |

Thursday

| <i>TIME</i> | <i>BRIEFING/EVENT</i> | <i>BRIEFER</i> | <i>OPR</i> | <i>LOCATION</i> |
|-------------|------------------------------------|------------------|------------|-----------------|
| 0700-0730 | Continental Breakfast* | | DSR | GRPC |
| 0730-0930 | Values, Ethics, and the Commander* | Brig Gen Regan | JA | GRPC |
| 0930-0945 | Break* | | DSR | GRPC |
| 0945-1035 | Spouse Panel* | TBD | DSR | GRPC |
| 1035-1045 | Break | | DSR | GRPC |
| 1045-1145 | Staff Interaction | | | HQ AMC |
| 1145-1300 | Lunch at Leisure* | | | |
| 1300-1500 | TRICARE/Medical Services/Issues* | Col Hancock | SG | GRPC |
| 1500-1515 | Mentor Remarks* | Brig Gen Ferraro | MA to LG | GRPC |

Air Combat Command

Mon, 26 Jan 98 - ACC Conference Center, Amphitheater

| Lsn | Title | OPR |
|------------|---|------------|
| 104 | <i>SQ/CC and the Law (Part I)</i> | JAM/7651 |
| 104 | <i>SQ/CC and the Law (Part I, cont)</i> | JAM/7651 |
| 207 | <i>Commander's Program and Orderly Room</i> | DPX/3510 |
| 313 | <i>Chaplain</i> | IGP/8708 |
| 206 | <i>The IG and Squadron Readiness</i> | IGP/8708 |
| | <i>COTT</i> | SVC/7024 |
| 201 | <i>Logistics Plans and Programs</i> | LGX/7691 |
| 109 | <i>Wing and Vice Commander Panel</i> | |

Tues, 27 Jan 98 - ACC Conference Center, Amphitheater

| Lsn | Title | OPR |
|------------|--|---------------------|
| 305 | <i>SQ/CC and the Law (Part II)</i> | JAM/7651 |
| 305 | <i>SQ/CC and the Law (Part II, cont)</i> | JAM/7651 |
| 406 | <i>Tricare</i> | SGMSO/0169 |
| 406 | <i>Medical Issues</i> | 1 AMDS/1265 or 6321 |
| 112 | <i>Mental Health</i> | SGOC/0128 |
| 112 | <i>Mental Health (cont)</i> | SGOC/0128 |
| 110 | <i>SEA/First Sergeants Panel</i> | |

Wed, 28 Jan 98 - ACC Conference Center, Amphitheater

| Lsn | Title | OPR |
|------------|----------------------------------|-----------------------------|
| 101 | <i>Senior Leader Perspective</i> | COMACC/3204 |
| 302 | <i>Public Affairs</i> | PA/5471 |
| 403 | <i>Financial Management</i> | FMAI/5674 or 5431 |
| 309 | <i>Contracting</i> | LGCR/5373 |
| 410 | <i>Facilities</i> | CEP/3002 |
| 311 | <i>OSI</i> | AFOSI, Reg 2/5833, ext 2002 |
| 308 | <i>Security Forces</i> | SFXR/2828 |
| 110 | <i>Squadron Commander Panel</i> | |

Thu, 29 Jan 98 - ACC Conference Center, Amphitheater

| Lsn | Title | OPR |
|------------|---------------------------------------|------------|
| 408 | <i>Managing Human Resources</i> | DPCM/3680 |
| 203 | <i>Personnel Augmentation Support</i> | DPW/8070 |
| 412 | <i>Assignment Process</i> | DPA/2646 |

| | | |
|-----|---|-----------|
| 405 | <i>Officer Promotion System</i> | DPPP/4149 |
| 307 | <i>Evaluation System/Education & Training</i> | DPPP/4149 |
| 407 | <i>Enlisted Professional Development</i> | DPPP/4149 |
| 401 | <i>Manpower and Organization</i> | XPM/2616 |

Fri, 30 Jan 98 - ACC Conference Center, Amphitheater

| Lsn | Title | OPR |
|------------|---|-------------------------------|
| 407 | <i>Enlisted Professional Development (Cont)</i> | DPPEM/2027 |
| 204 | <i>Status of Resources and Training System</i> | AOCR/4630 |
| 312 | <i>C4 Systems</i> | SCY-2/0915 |
| 205 | <i>Environmental Issues</i> | CEVOO/9303 |
| 310 | <i>Services</i> | SVC/7024 |
| 301 | <i>Family/Individual Support</i> | DPCH/2689 |
| 207 | <i>Characteristics of a Leader</i> | Brig Gen (Ret) Abel /247-7502 |
| 207 | <i>Characteristics of a Leader (cont)</i> | Brig Gen (Ret) Abel/247-7502 |

Mon, 2 Feb 98 - ACC Conference Center, Conference Room 1

| Time | Lsn | Title | OPR |
|-------------|------------|--|-------------------------|
| 0745-0800 | | Light Refreshments | |
| 0800-0830 | 411 | <i>Safety</i> | Col Marshall/SE/8800 |
| 0830-0900 | 4++ | <i>Operational Risk Management</i> | Col Garhart/SE0/8801 |
| 0900-0910 | | Break | |
| 0910-1020 | 303 | <i>Casualty Affairs</i> | Maj Fogarty/DPX/3510 |
| 1020-1040 | 304 | <i>Mortuary Affairs</i> | Capt Parr/SVXP/2921 |
| 1040-1050 | | Break | |
| 1050-1150 | 3++ | <i>Force Protection Level III Training</i> | Lt Col Dickey/SFPP/2958 |
| 1150-1200 | | Wrap Up | DPPEM/2027 |
| 1200-1300 | | Lunch | |
| 1300- | | FUNCTIONAL TIME WITH DIRECTORATES | |

Air Education and Training Command

MONDAY, 15 Dec

(Briefings in Bldg 905, AETC Conf Rm)

| | | |
|-----------|---|-----------------------------|
| 0715-0730 | Morning Refreshments | |
| 0730-0800 | Opening Address (AETC/CC) | |
| 0800-0810 | Break | |
| 0810-0830 | Welcome/Admin Remarks | |
| 0830-0840 | Break | |
| 0840-0930 | Values, Ethics & the | Cmdr (AF Academy) |
| 0930-0940 | Break | |
| 0940-1030 | Values, Ethics & the | Cmdr (Cont'd) |
| 1030-1040 | Break | |
| 1040-1140 | Financial Management & | the Cmdr (AETC/FM) |
| 1140-1300 | Lunch | |
| 1300-1330 | Recruiting Service Briefing (AETC/RS) | |
| 1330-1340 | Break | |
| 1340-1410 | Services and the | Commander (AETC/SV) |
| 1410-1420 | Break | |
| 1420-1510 | Family Support Center & | the Cmdr (AETC/DPSF) |
| 1510-1520 | Break | |
| 1520-1550 | The Chaplain and the | Cmdr (AETC/HC) |
| 1550-1600 | Break | |
| 1600-1630 | Session for Cmdrs with IMAs (AETC/CCR) | |
| 1630 | Adjourn | |
| 1655 | Depart for the O'Club | |
| 1700 | Ice Breaker (O'Club Skylounge) | |

TUESDAY, 16 Dec

| | | |
|-----------|--|---------------------------------|
| 0715-0730 | Morning Refreshments | |
| 0730-0820 | Casualty Affairs (AFPC/DPW) | |
| 0820-0830 | Break | |
| 0830-0920 | The IG and the Squadron | Cmdr (AETC/IG) |
| 0920-0930 | Break | |
| 0930-1020 | Leadership & | Accountability (AETC/CV) |
| 1020-1030 | Break | |
| 1030-1120 | Leadership & (Cont'd) | Accountability |
| 1120-1300 | Lunch | |
| 1300-1400 | Operations Briefing (AETC/DO) | |
| 1400-1410 | Break | |
| 1410-1500 | Social Actions and the Cmdr (AETC/DPH) | |
| 1500-1510 | Break | |
| 1510-1540 | Public Affairs & the Cmdr (AETC/PA) | |
| 1540-1550 | Break | |
| 1550-1620 | Facilities & Environmental Issues (AETC/CE) | |

1620 Adjourn/19AF Sq/CCs depart for Bldg 661
1630-1700 **Perspective for 19AF Sq/CCs (19AF/CC)**

19 AF Social Function. See Page 2

WEDNESDAY, 17 Dec

0715-0730 Morning Refreshments
0730-0820 **The CC, The Law, and Judicial Issues (AETC/JA)**
0820-0830 Break
0830-0920 **The CC, The Law, and Judicial Issues (Cont'd)**
0920-0930 Break
0930-1020 **The CC, The Law, and Judicial Issues (Cont'd)**
1020-1030 Break
1030-1120 **The CC, The Law, and Judicial Issues (Cont'd)**
1120-1300 Lunch
1300-1350 **The CC, The Law, and Judicial Issues (Cont'd)**
1350-1400 Break
1400-1430 **Security Forces & the Cmdr (AETC/SF)**
1430-1440 Break
1440-1510 **OSI and the Commander (AFOSI Region Four)**
1510-1520 Break
1520-1610 **Medical Services and the Commander (AETC/SG)**
1610 Adjourn

THURSDAY, 18 Dec

0715-0730 Morning Refreshments
0730-0820 **Officer Promotions (AFPC/DPPPO)**
0820-0830 Break
0830-0920 **Evaluation Reports (AETC/DPP)**
0920-0930 Break
0930-1020 **Contemporary Personnel Issues (AETC/DP)**
1020-1030 Break
1030-1120 **Civilian Personnel and the Cmdr (AETC/DDP)**
1120-1300 Lunch
1300-1400 **Enlisted Promotion Programs (AFPC/DPPPW)**
1400-1410 Break
1410-1440 **Air University Briefing (AETC/ED)**
1440-1450 Break
1450-1550 **Senior Enlisted Perspective (12 FTW/CC)**
1550-1600 Break
1600-1700 **First Sergeant's Panel**
1700 Adjourn

FRIDAY, 19 Dec

0715-0730 Morning Refreshments
0730-0820 **Suicide Prevention and the Commander (AETC/SG)**

| | |
|-----------|---|
| 0820-0830 | Break |
| 0830-0920 | Squadron Cmdr Panel |
| 0920-0930 | Break |
| 0930-1020 | Squadron Cmdr Panel (Cont'd) |
| 1020-1030 | Break |
| 1030-1100 | Communications & Information (AETC/SC) |
| 1100-1110 | Break |
| 1110-1140 | Plans & Programs Brief (AETC/XP) |
| 1140-1300 | Lunch |
| 1300-1330 | Safety & the Commander (AETC/SE) |
| 1330-1340 | Break |
| 1340-1440 | Wing Commander's Perspective (56 FW/CC) |
| 1440-1500 | Break |
| 1500-1600 | Closing Session (AETC/CC) |
| 1600 | Adjourn |

Appendix D

Transcription of Survey Participant Comments

The comments are associated with the survey items. The numbers in parentheses are the numbers assigned to participants. This allows correlation while preserving anonymity.

REALISM AND CREDIBILITY

15. As a squadron commander, I have used the same resources available in the resource “hot links” in similar situations.

- (15) Detachment commander-To a limited extent.
- (18) Yes, certainly. But I've used others as well that are not represented.
- (21) They're critically important!
- (24) CCs don't do the job w/o getting expert advice from around the base.
- (41) However, the program didn't capture the personality aspect – I usually got 3 *different* opinions about the same subject.
- (48) JAG/Social Actions/Civ personnel are big players
- (49) Absolutely. This program was on target. I personally dealt with virtually every problem illustrated in the program

16. The scenarios presented in the Simuworld program are representative of situations I have encountered as a squadron commander.

- (3) Except the promotion scenario.
- (5) Seem to really emphasize legal/disciplinary problems which *are* difficult & time consuming.
- (18) This scenario is way too lenient – schedule is too easy. Life is not like this.
- (19) Almost have to take a JAG with you when you “walk around”. People will bring up incredible scenarios.
- (20) This is a no-s—t good representation of a week in the life.
- (21) The “death” scenario isn't that common, but nonetheless a good one to include.
- (24) Encountered some of the very same situations - thank goodness not all in one week.
- (27) I had more problems with the 80% that were civilian.
- (34) I don't think the group CC inputs are all that realistic.

- (35) Actually, they were quite good in that sense.
- (36) In a general sense, yes but in real world each case is different, so it's hard to come up with clear general answers.
- (39) OK, except group CCs don't interfere.
- (41) Most of my decisions were enhanced by quality information from the 1st Sgt. and chief.
- (47) Excellent scenarios

17. Overall, the scenarios presented in the Simuworld program represented some of the most difficult challenges facing new squadron commanders.

- (10) A wider variety of legal situations, suicide, etc. would be useful for learning. Make it the week from hell.
- (16) Yes, casualty notification, drugs, civilian issues.
- (18) No deployments; no inspections; no family problems; no real \$ problems; no planning; no enlisted problems to speak of.
- (19) Good you included civilian problems - will become prevalent with outsourcing - and in an area ignored by most military.
- (20) Common changes.
- (24) Taking care of people's needs are key to CC success.
- (29) I found these scenarios to be very realistic.
- (31) Very nice variety!
- (34) I would add an AWOL situation.
- (35) Did provide a means to experience the "pressure/heat" you'd receive for not knowing what happened over the weekend (Tsgt Blah scenario). They seemed rather easy, clear-cut cases. The hard ones are where the JAG, Mental Health etc. won't give you clear advice or worse give conflicting advice.
- (38) Might include a "suicide" scenario.
- (39) On target
- (49) Yes, however I did face one situation you might consider. It was sexual harassment of a male officer by a female civilian. Absolute nightmare

USEFULNESS

13. The "hot links" to resources (JAG, orderly room, MPF, etc.) available were useful in decision making.

- (3) Best part of program.
- (5) Required info for a SQ CC if you don't look at them you're not playing realistically or a poor commander.
- (10) Best value of program, teach CCs where to go for info, what's available.
- (12) If you were a CC at one point, these narratives were merely "review" items.
- (16) They were very good.
- (18) Yes, but 1) using just these links dilutes lesson that advice can & does come from a variety of people not "hot linked" and 2) In 2nd TSgt Blah incident, the JAG link contained info on SP link that hadn't yet been accessed. People go L to R - can't have info on a button that you haven't accessed yet.
- (19) Very realistic decision matrix.

(20) In each situation you should stress more that as a CC, he will have many resources available to help him. He should always use them *BUT* he is the CC & he must make decisions based on what *he* thinks is right (not the JAG)!

(21) Would move resources before questions for consideration. This would prompt an idea of getting help first.

(24) Gave appearance of real life support to help solve problems.

(26) It was a very good way of teaching you who has a "dog in the fight" in each of the scenarios. I.E. should you call JAG or not? It showed you that you should.

(29) Very useful information for situation and provided realistic approach for commanders to follow.

(30) This was very realistic and extremely beneficial to show a new commander the resources available.

(34) This would augment a discussion in a group environment.

(36) The hot links were good and gave you good info. In real world, you never get such clear answers/advice from JAG or hospital. You have to dig to get the info

(38) Especially liked the comments if wrong agency was selected (In my day, "social actions" was the focal point for alcohol related incidents...now is Mental Health).

(39) Good references for any CC.

(40) One of the best parts of the program.

(49) Outstanding aspect of the program

18. The Simuworld program would have been beneficial to me as a new squadron commander.

(1) A lot of the stuff could not be understood until you actually do it.

(5) Makes a person consider issues.

(10) Yes, but... MAJCOM course more comprehensive.

(13) This would have been good *before* being a CC.

(18) I've had 2 squadrons and learned from my time as a deputy as well as learning through the advice of senior commanders. No, this wouldn't help

(21) Useful tool for SQ/CC orientation programs and ACSC.

(24) Incorporating into SQ CC training program would be a great benefit for new CCs.

(26) If administered correctly.

(29) All new SQ/CC should have access to this program.

(35) A good learning tool/reference. It would've been nice to make some decisions and see what would happen, but that would be a very interactive and complicated program.

(38) Not just as a CC. I'd been a HQ Section CC for 4 years and faced similar situations.

(39) Well worth the effort.

(49) Yes, I strongly recommend having SOS squadron CCs go through

19. I recommend the Simuworld program be a part of squadron commander course curricula.

(10) Need a hard scrub of legal, policy issues in your scenario solutions

(12) Only if individuals could group together & discuss scenarios & leadership challenges posed.

- (15)Be sure to allow sufficient time for the students to go through it.
- (21)Absolutely!
- (24)Maybe complete prior to course and discuss during.
- (31)Great learning tool/discussion kickoff.
- (34)This would be great in discussion format.
- (35)Materials good, but don't see a need to present via this type of program.
- (39)Expand to include more scenarios (sexual harassment, etc)
- (49)Hands-on navigation through agency coordination and legal issues is a plus for this program

20. I recommend squadron commanders who do not attend a formal squadron commander school complete the Simuworld program.

- (5)Need all the help you can get.
- (8)All ETC SQ/CC must attend.
- (10)Better than nothing.
- (12)It would be helpful but each contextual situation is different. We learn most by doing.
- (19)All SQ/CC should attend formal training.
- (20)No- it should be to augment -not in lieu of the CC course
- (21)Those who do attend should do it too.
- (24)Good way to learn system before problems arise.
- (29)However, both are essential.
- (35)A good starting point, some good references.
- (36)Need to make (squadron commander school) mandatory.
- (39)Part of PME taught to all officers at the right time.

COMPLETENESS

14. There was sufficient information in each scenario to make an informed decision.

- (3)But more info is always better, but we rarely get it.
- (5)Adequate to get points across.
- (10)Enough for program's purpose.
- (12)For the most part.
- (18)Making personnel decisions in any capacity requires a sense of the entire situation, i.e. situational awareness. You don't get that on a computer.
- (24)Although not exactly the same as actually being there - was adequate.
- (26)Previous performance of individuals lacking. If had TSgt Blah had other alcohol related problems or anger management problems before his fight in NCO club.
- (35)However, I don't know how you could include the in-depth knowledge a SQ CC would have about his people & squadron in a simulation.
- (36)Cases are never that cut and dry. What you know about the people in your squadron plays much bigger role. Relationships are key.
- (39)Good effort. Not realistic enough to include everything.
- (48)In several cases, I'd like to have more eyewitness statements

17. Overall, the scenarios presented in the Simuworld program represented some of the most difficult challenges facing new squadron commanders.

- (10) A wider variety of legal situations, suicide, etc. would be useful for learning. Make it the week from hell.
- (16) Yes, casualty notification, drugs, civilian issues.
- (18) No deployments; no inspections; no family problems; no real \$ problems; no BLA problems; no planning; no enlisted problems to speak of.
- (19) Good you included civilian problems - will become prevalent with outsourcing - and in an area ignored by most military.
- (20) Common changes.
- (24) Taking care of people's needs are key to CC success.
- (29) I found these scenarios to be very realistic.
- (31) Very nice variety!
- (34) I would add an AWOL situation.
- (35) Did provide a means to experience the "pressure/heat" you'd receive for not knowing what happened over the weekend (TSgt Blah scenario). They seemed rather easy, clear-cut cases. The hard ones are where the JAG, Mental Health etc won't give you clear advice or worse give conflicting advice.
- (38) Might include a "suicide" scenario.
- (39) On target

FUNCTIONALITY

7. The "hot links" to resources were easy to access.

- (5) Only one problem to Biggs' UIF.
- (10) Most units don't have comprehensive Internet access - All unique.
- (14) Had problems getting PowerPoint slides to run.
- (21) Would move resources before questions for consideration. This would prompt an idea of getting help first.
- (24) Access time often lengthy.
- (30) How do you schedule an appointment, make a phone call?
- (34) Need to be consistent with how to move back - either use "R" or back but not both.
- (40) Very helpful.
- (41) Took too long on our AWC twin head computers.

8. The Simuworld program ability to reference information from one day to another was adequate.

- (5) I did it all in one afternoon so I didn't notice any problems.
- (24) Access time often lengthy.
- (29) Made situations easy to go back & review. Helpful for identifying and updating thoughts.
- (34) I felt this was more of a scenario-based program than an interactive model.
- (36) Seemed to have to repeat day to get some info.
- (39) OK, but really didn't add greatly to the program.
- (44) Difficult to move from day to day.

9. The "Navigation Tips" in the index simplified navigation through the Simuworld program.

(5)OK. The tip about not using browser back button was confusing since at time it was required.

(10)Not needed.

(17)Seem about right.

(18)Not really. Once read, they're forgotten and you're doing the program.

(19)Need to better explain that it is a non-participatory program. I tried to answer the questions.

(24)Very helpful.

(30)Tips were helpful, but needs to be more on moving through the schedule.

(47)Need more detail on lunch and getting in and out of program

10. The Simuworld program should be increased in length.

(3)Depends on what the objective is?

(5)Can cover some additional topics.

(10)Survey MAJCOM/Sqd CC courses, cover all the topics possible.

(11)Good program. Could have additional utility with more scenarios.

(12)A week is long enough.

(15)About right.

(17)Seems about right.

(18)Depends on how it's to be used – too much for one sitting.

(21)Absolutely not! To do so would be too overwhelming.

(23)Length is not a problem—content should be driver.

(24)Although very good - one week in life of a CC not adequate to give full flavor of job.

(26)It's almost too long now to read everything.

(27)More reference to civilian employee issues.

(29)I think the amount of scenarios is adequate to provide a broad perspective of situations a commander encounters.

(31) I'd make it about 24% shorter.

(39)About right

(43)The program is about the correct length.

11. The Simuworld program should be decreased in length.

(12)Works well.

(15)About right.

(17)Seems about right.

(18)Depends on how it's to be used – too much for one sitting.

(21)It's about right.

(24)Would decrease effectiveness as learning tool.

(29)One week gives it a realistic perspective and allows scenarios to play out fully.

12. Overall, I found navigation through the Simuworld program user-friendly.

(15)Must stay focused.

(16)3 times I had to exit the program because I couldn't advance to the next day.

(26)had to use bookmarks if didn't finish in one sitting. If accidentally hit "home" you went all the way out of program. Program needs to remember where you left off and start you at that point when you re-log-in.

(38)Exiting and reentering difficult, gave up, restarted each time on Monday.

GENERAL COMMENTS

21. What were the greatest strengths of the Simuworld program?

- (1) It is realistic.
- (2) Realism, accuracy or information and decision making analysis. More instructive than 2-week AF-level Support Squadron Commanders course. Simuworld got into the "nitty-gritty" of decision making
- (3) "Hot link" w/ various base agencies. Good scenarios. Not sure about the O'Club stats. I've never seen a slide like that before.
- (4) Focusing on the major, time-consuming problems or issues facing commanders. Realism of issues.
- (5) Introducing situations requiring judgment, thought & ability to reference material & personnel to help you, didn't see any OSI situations though.
- (6) Legal comments and regulation references.
- (7) Capturing the unpleasant or "negative" aspects of the job in a very realistic fashion. These scenarios are indicative of problems that will occur. Also there is seldom a clear-cut answer.
- (8) The *info* was superb.
- (9) The value of the program is not to provide experience or the "answers" to problems encountered in command, but the value is to expose the 'student' to the variety/complexity of problems.
- (10) Accessibility.
- (11) Ease of use. Appropriate scenarios.
- (12) The scenarios presented were definitely current & presented important issues facing commanders.
- (13) It is a good example of what types of challenges a CC will face.
- (14) Variety & realism of scenarios were main asset. These represented likely problems a SQ CC is going to come across, links to "help" areas (JAG, etc.) were detailed enough. Also liked the way the event w/ the Sgt. & alcohol grew from a "minor problem" to a major event.
- (15) Variety of situations and the depth of supplemental data available. (Almost too much at times).
- (16) Well done. It flowed like a tough week. It was self-paced. Well documented with all the hot links.
- (18) Good access to applicable regs.
- (19) Realistic scenarios w/ problems surfacing in the most unexpected forums. Emphasized developing a plan to present your boss – critical to success (in any job).
- (20) Demo'd many real world situations the CC *will* face. The program will get him thinking about what he will do when he faces them.
- (21) #1 Realism- diversity of typical scenarios was great. #2 Impact- gets person "wet up to the eyebrows" with how much really goes on. #3 Resources available via the hot links. Not as good as the real thing (face-to-face) but a very suitable sub.
- (22) The "hot links" to appropriate resources were convenient and useful. Scenarios are realistic.

- (23) a good reinforcing mechanism for the value of resources available to the commander in the decision-making process.
- (24) Provided real world situations that commanders face on a regular basis & identified processes for solving them.
- (25) It was a very good program overall—very insightful!
- (26) #1 A great cross-section of “gray” situations where the right thing to do is neither black nor white. #2 An appreciation of other agencies on base (JAG, SA, MPF, etc.) and the importance they play in everyday decisions I your sq (1st Sgt., too!)
- (27) The hot links to resources.
- (28) Various scenarios presented were true to life. Reflected the fast paced schedule of life at wing level.
- (29) Realistic situations with advice from consultants to keep Sq./CC on track.
- (30) Realistic environment.
- (31) This is great stuff! Situations were real and variety was “wide” enough to cover areas of significant emotional events.
- (32) Realistic scenarios with hot links to the resources most CCs rely upon (1st shirts, JAGs, AFIs).
- (33) It covered many of the issues CCs face. Many people never think about these things until they take command. This helps you think in those terms and provides good resources for info. Good wrap up at the end of the day.
- (34) Problem areas such as the fight, casualty etc.
- (35) Clearly shows the number of things a SQ CC has to think about and what some of the resources can do for him/her. A good way to get new SQ CCs to think about the issues: however I see the time turning them off.
- (36) Gives a taste of issues you deal with in an easy to use, no threat environment.
- (37) Good reference material, easy to hot link and quickly review.
- (38) Realistic! Someone obviously put a lot of time and effort in developing the scenarios and links to the agencies that are charged with advising commanders. Explanations depicting the role of agencies and published references that equate to each scenario.
- (39) Scenario driven – schedule was realistic. Gives new CCs a good look at some situations which may occur and some possible solutions.
- (40) Showing variety of issues a SQ/CC will face.
- (41) Captured essence of SQ/CC—by showing how diverse situations can be. Should be “eye-opening” to operational types who think that they can fly all the time as a CC.
- (42) Its focus is on realistic scenarios.
- (43) Describing links to others in making decisions.
- (44) Realistic scenarios.
- (45) Representative of issues I encountered. Personnel, budget and ops issues
- (46) The scenarios were realistic
- (47) Scenarios and information sources
- (48) Gave scenarios which are realistic. Squadron CCs will face almost every one of these scenarios

(49)The strengths were how the program allowed CC to navigate through scenarios, handle problem, while accessing information and guidance that would be available to CC. CCs need to understand how system (legal, sq org, promotion, civ) impact decision process. The casualty notification was a real plus.

(50)Wide variety of situations and resources. Scenarios provided realistic situations which caused a good deal of thought to go into decisions. Scenarios realistically affected other scenarios

22. What were the greatest weaknesses of the Simuworld program?

(1)The personal aspect cannot be simulated.

(2)Once a hot button was used, the program didn't return to the hot button area. The result addition use of the mouse to "hit" another hot button.

(3)Scenario appears to be based on a CONUS, USAF base. My experience was as a Det CC in a USN run RAF base in the UK. No readfile to plow through. The e-mail & in-box were very light, but do get the point across.

(4)Lack mission-oriented topics...but I understand this is hard to incorporate with the many functional areas.

(5)Thought it lacked balance in representing some issues - you really can't punish people hard (art 15,UCMJ) without *positive* proof, so early situations weren't realistic -O'Clubs *are* in trouble so I agree with emphasizing positives but this one sold clubs so muck I found it a turn off.

(6)The 1st Sergeant wasn't as helpful as most would be.

(7)The background color in the program often makes the wording difficult to read. This may discourage some people from completing this intensive program. Can this be made to appear clearer, more contrast?

(8)computer locked up twice. Ws difficult to get from one day to the next. There are still some problems with the navigation process.

(9)Operational issues/problems & mission considerations was missing. Death of a squadron member normally requires full attention for at least a week...unrealistic to keep appointments & meetings on days after casualty. I recommend you move that event to the last "day".

(10)Requires good Internet connection. Limited selection of scenarios. Watch "command influence" issues on the JAG scenarios.

(12)Because it is a simulation, it appears more linear that "real world" scenarios are. Commanders often get bombarded by many issues all at once & they are often dealing with more than one emergency at a time.

(13)There was a lack of letting a CC make a choice, be it either right or wrong.

(14)Technically, I couldn't the PowerPoint slides to operate.

(15)Readability of some of the text(e.g. screens with white CCs words on blue and UMD). Also, hot button hard to read—and I've got 20-20 eyesight and a 17inch monitor.

(16)As with any paper exercise like this, it's hard to true form conclusions with real flesh and bone people to base your decisions.

(18)Overly dependent on the limitations of the computer, i.e., Blah incidents and other disciplinary things are talked about in the sterility of regulation references and have an over dependence on what the lawyers say. How can we simulate

judgment unless you make the program interactive. If this is used, people will believe this is how stuff is done and will be really surprised.

(19)"Cute" use of technology. "Can" the Macarena image—distracting, unnecessary. Also, Tuesday's letter had several typos/misspellings—but context was excellent.

(21)#1 Getting up to speed on the navigation - but that's better than not having the info. #2 Doesn't show long term impact of SQ/CC decisions...some are good, others are not and need re-addressing later.

(22)The lack of interaction. It would be more productive if participants had the opportunity to choose a source of action before seeing Simuworld's proposed solution.

(23)Navigation was not difficult, but it was easy to lose track occasionally. It might be beneficial to have a color change effect for those references already visited.

(24)If added to a SQ CC course curriculum would expand so problems could be worked in real time - had some computer crashed while accessing files from net.

(26)#1 Length of program. Definitely something you don't want to do at one sitting. Every hyperlink I looked at had some great information, but after a while I got tired of "surfing the program" info every last nook and cranny, even though it was all good information. #2 too oriented to self-teaching. More benefit to be gained by interaction with others to discuss differences in ways to handle situations.

(27)Lack of follow-thru on come of the potential adverse actions and the consequences to the member and squadron morale.

(28)It would be nice to actually chose & implement an action and see results reflected in later stages of the program.

(29)No in-box exercises.

(30)Instructions for taking actions. It asked us to make appointments. Is there a way to put appointments on a calendar or do we simulate it?

(31)Possibly need to put "fraternization" situation in there too. Topic is very AF-wide.

(32)If an individual did not utilize each of the available hot links, then much of the information would never be seen by the user.

(33)Slow – probably due to my computer, but it was frustrating nonetheless. I didn't think the e-mail was very effective. I don't read all e-mails (in my life) because I know some is trash. But I couldn't tell with this scenario – I had to read each one. Phone should ring a lot more.

(34)E-mail was a waste because it was hard to figure out why we were reading it.

(35)Not interactive enough; unfortunately that's not something easily fixed. Missing the personal touch/interaction. I'd want to know why my first sergeant didn't contact me—first sergeant wasn't a prize!

(36)Gives too much a "book answer" which is never completely right in real world. For a squadron with a large enlisted force, it does not account for the advice, usefulness, or need to get senior NCO, 1st Sgt. input to issues. Does not allow for the personal relationship factor.

(37)Color scheme! Tends to be difficult to read.

- (38) Stopping and reentering. This was a real "pain."
- (39) Not interactive –CCs seemed too remote from people. Too formal – where is the open door policy?
- (40) Doesn't take into account the difficulty of working flying into the schedule while doing everything else. Causes late nights and weekends to catch up on paperwork.
- (41) Doesn't capture many "integrity" issues you are faced with; from visits by congressional delegations to dealing with "gray areas."
- (42) No opportunity to interact.
- (43) Does not allow the "human" factor by observing nonverbal communications.
- (44) Navigation difficult at times
- (45) Too long. Recommend compressing into 2-3 "days." Does not address operational issues such as MICAP problems, evaluation failures, de-certification of operators.
- (46) No interaction
- (47) Would like to see some scenarios brought to closure, with the ability to see the final documents (i.e. LOR, Article 15, etc.)
- (48) Recommend having a class (half-day) where Simuworld is presented. Students could discuss their thoughts at the end of each simulated day.
- (49) Need to somehow get more closure on the TSgt Blah issue. That is an interesting situation that has a high incidence of occurrence. Perhaps if you could add decision buttons that will give the CC different outcomes to the different scenarios.
- (50) Taken by itself, there is no learning through interaction from other person's experience. Simuworld would be most effective if group discussions could be held after each day's scenarios are completed. Learning would build exponentially upon previous day's scenario.

23. What are your suggestions for improvement?

- (1) As a training tool, I like it the way it is.
- (3) Add a WAPS scenario. (cheating, integrity). Add alternate scenarios for an overseas base USAF host & non-USAF host to add different dimensions to commanders going to their types of units? Add shift work scenario if appropriate.
- (5) Need some work type situations such as wing CC requesting info directly (bypassing chain so you must back brief). Most officers unfamiliar with enlisted promotions & performance reports so I would include those in scenarios.
- (6) Program could offer some real world examples (excluding names) and provide commander's solutions.
- (7) Incorporate a commander's call, as that is the primary means to talk to the troops. Add potential suicide scenario.
- (9) I strongly recommend group discussions be included at the end of each "day".
- (10) Make it the week form hell, survey the MAJCOM SQD/CC course for topics and include as many as possible in deeper detail.
- (11) Could have more scenarios.
- (12) Suggest that Simuworld be integrated into a bigger scenario where individuals work together & are given time to "process" the information & discuss issues. This would be especially important if students were new commanders.

(13)I would like to see more interaction and a sort of mentoring by a senior advisor. It would so something like this, Challenge-Decision-Tutoring (make this verbal by an old head commander). I think another tool would be to have a hot linked program than an acting CC can use to find/reference on short notice. That is one the hardest/time consuming things for a CC to do is find out what help is out there. It could look sort of scenario based with hot links to the same reference material you use in Simuworld. This then becomes an active tool readily available to the CC.

(14)I think use of this program ideally would be in conjunction with classroom/guided discussion work. A new commander/select should have an opportunity to discuss possible actions/responses with the SQ CC course classmates & instructors. Use of the program, by itself, may be more confusing than helpful. Recommend you test it with some folks who haven't commanded to get their views.

(15)None, other than addressing the above & fixing a few typos/grammatical errors. Need to explain up front that not all links are active for all situations. Excellent tool—Just be sure to allow “students’ sufficient time to work their way through at their own pace. Due to my work schedule, I felt rushed and it impacted my enjoyment & learning process. Update CSAF photo on final screen.

(16)this is a strong program on its own. I think we could use others Simuworlds with different cases -same weekly format. And, we should develop others around a specific scenario, i.e. handling the crisis communications aspect of a high visibility adultery or sexual harassment case. The UIF Forms were unreadable. Typo-SSgt Forten EOT Issues page - line 2 assignment. As an executive officer in several squadrons, I've seen worked with many new commanders we've never deeply thought about command until it was thrust on them. This simulation is right on time in that they can work their way through all types of issues, harmlessly.

(19)Integrate planning for inspection. In a short 22 months I faced a QAFA, 2 ORIs (Phi & PhiI) and a NSI.

(20)You should stress #1the CC *is the* boss. In this case he should have fired the 1st shirt & replaced him with one who could do the job. He needs to build his staff with people he can work with. #2 He will face most if not all these situations -be ready.

(21)#1Beef up the credibility of the First Sgt.- none would be as dense or reserved as this. The CC.1st Sgt. team should be shown as absolutely essential for successful cmd. #2Include at least one weekend day preferably two as is, this the impression job is Mon-Fri. #3 Stress doing things the “right way” vs. “jumping the gun” a few more cautions or gotchas wouldn't hurt (o.e.- in death scenario &search and seizure issues).

(22)Add and interaction capability if possible. Also, typical interruptions; i.e., phone calls and unscheduled visitors should be incorporated—we all know how frequently this occurs and how troubling it can be.

(23)I think it is a strong product. It should be reviewed periodically with base support agencies to validate currency of content and appropriateness of issues.

(25)I really would have liked to have seen some interaction between the player and the computer. In this I mean the commander in given a course to choose from and once they click on that course it places them into the ramification of that decision—good or bad. But, I realize this is too high tech for this type of project at this day and age.

(26)This is a great program, but I don't think it can be a stand0alone effort. It needs to be combined with other instruction to get maximum benefit. Recommend making it a part of formal Sq. CC course to enhance the dry briefings already given @ Sq. CC courses. Have them actually do it over a course of a week (since it is *so* long). I would give them 30-60 min to go thru the day and then offer an opportunity for discussion among the participants to get the benefit of different points of view. This interaction would be a lot better debrief and learning than the end-of-day analysis, (but don't get rid of analysis, either... it served a purpose also) conducted between you and your computer.

(27)Include more civilian employee problems/solutions and hot linked resources. Add an issue with higher-ranking commander or wing staff officer outside the Sq./CC's chain.

(28)More interactive. I.e. E-mail says you need to schedule an appointment - should be able to schedule it on program, allows one to practice priority scheduling. i.e. disciplinary action- should allow person to choose action & see results as well as recommendations on others COAs.

(29)Actually incorporate a punishment decision - LOR, etc.

(30)I don't know how you portray the role of the section commander but they can do a lot for a commander. They should be heavily involved with personnel issues.

(31)The "politics" of being in command is also a significant challenge. How about a situation where you significantly oppose your group CC/wing CC position? It is worth working through.

(32)Use the schedule as the primary background page, whereby the user would sequentially proceed through the program, and not have to rely on the back button so much.

(33)Should have more interface with the first shirt he/she is *very* important to squadron CC effectiveness.

(34)Use in a group format.

(35)I don't see any major changes, maybe a few tweaks like maybe actually having to input things into things and juggle the schedule. It would be pretty tough to make the program really interactive.

(36)Give less clear answers, they are never that easy or pat. Build up less clear, hard cases. If used, the program would need follow-up discussions so new commanders would get benefit of experience.

(37)Work on the color schemes. But overall I thought it was a very good product. Suggest it would be useful to incorporate a "New Commander's Checklist." Kind of a "must do" list upon assuming command to ease transition.

(38)Make extremely user friendly at about the "village idiot" level. Especially if this product would be available to those not attending a formal course.

(39)Tone down group CC. If subordinates going over your head then should address this issue. If boss is asking then got to get back-briefed by your folks.

- (41)Should be combined with a book/publication that identifies sample situations.
- (43)Add another interaction site of interfacing with other squadron commanders in discussing problems.
- (44)Allow navigation freely between scenarios.
- (45)The program was great. Rolling in some operational problems and public affairs issues may be helpful
- (46)It would improve the program if interaction could be added. Add answers or actions in sequence. Certain actions as a commander need to be in a specific sequence of your mess up
- (49)Great program. Consider adding personal problems to CC plate i.e. kids get sick, parent dies...things like this will throw CC off, just as quickly as problems at work.
- (50)Overall good program. Little area for significant improvement in the program itself.

Bibliography

- Beatty, Steven J. et al. "Squadron Commander Simuworld Technology Project Description," Research Paper AU/ACSC/0156/97-03, Air University 1997.
- Air University, *Air University Sampling and Survey Handbook*, 1996, n.p., on-line, Internet, 2 February 1998, available from <http://www.au.af.mil/au/hq/selc/smpl-5.htm>.
- Survey Questions, Handcrafting the Standardized Questionnaire*. Sage Publications, Inc., 1986.
- Converse, Jean M. and Pressler, Stanley. *Marketing Research, Methodological Foundations*, 6th ed. The Dryden Press, 1995.
- Churchill, Gilbert. *Statistics and Measurement, An Introduction for MBTI Users*, 2nd ed. (1996, Zeisset Associates, Inc.) 11.
- Timmons, Timothy T. *Commanding an Air Force Squadron*. Air University Press, 1993.
- Rives, Jack L., et al *The Military Commander and the Law*. AFJAGS Press, 1996.

DISTRIBUTION A:

Approved for public release; distribution is unlimited.

Air Command and Staff College
Maxwell AFB, Al 36112