AIR COMMAND AND STAFF COLLEGE

AIR UNIVERSITY

# AIR COMMAND AND STAFF COLLEGE (ACSC)

# ACADEMIC YEAR (AY) 1999 MULTIMEDIA YEARBOOK

by

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A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

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## *Preface*

Initially, I volunteered to support the Yearbook Staff and their creation of the Air Command and Staff College's (ACSC) Academic Year (AY) 1999 Yearbook in hard cover format and a technology project on a U.S. battle or conflict. After many discussions with the Yearbook Staff, we thought it would be a great project to publish a multimedia version of the AY1999 Yearbook, both from a technical perspective and as a fund-raiser to defray the cost of publishing the AY1999 Yearbook. To achieve this goal, we decided to emphasis that these two products would be similar in some of their features but recognized the dynamic ability of a multimedia yearbook. The electronic version would allow us to provide the ACSC students with more pictures—100% color, video and audio capability. Clearly all of these characteristics are limitations of a paper yearbook. In addition to these capabilities, the yearbook staff recognized the ease of transporting a multimedia version and believed there would be a high demand for this type of media.

I would like to acknowledge the outstanding guidance and assistance I have received from my faculty research advisor, Major Andy Hall, the ACSC/DEX technical support of USAF Majors Joel Junker and Michael Foster, USAF for their Hyper Text Markup Language (HTML) Class and Mrs. Maria Welsh-O'Brien of White Cat Web Design for her technical expertise. Most importantly, I would like to thank my wife, Robin, and our

two children, Sean and Colleen for allowing me the time to create this worthwhile product.

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## *Abstract*

This technology project will be the first software-based yearbook for Air Command and Staff College (ACSC). A multimedia yearbook is a software-based application that incorporates still photos, video clips and audio clips into a single software package. This yearbook version will be similar to the hard copy version of the ACSC AY99 Yearbook. This multimedia yearbook project will rely on the multimedia capabilities of Hyper Text Markup Language, or HTML code, a web page publishing formatting language. This code will allow the maximizing of computer capabilities in creating dynamic, lively web pages and published on a Compact Disc, Read Only Memory or CD-ROM. The CD-ROM will contain both audio and video clips from activities (Division and Seminar parties, sports activities, class activities, etc.) and special events (Distinguished Guest Speakers, Gathering of Eagles, etc.) which occurred during the academic year

The academic memorabilia gathered throughout the year will be divided into logical sections or modules for easy grouping and access by the application users. The first module will contain pictures representing the Air Command and Staff College's chain of command from Brigadier General (Select) John Rosa, Jr. up to, and including, the President of the United States. The second module, Shining Moments, will consist of key ACSC activities and world events that occurred throughout the academic year. These activities and events will include excerpts from the various ACSC curriculum, formal events like the Navy Ball and Marine Corps Ball, family activities like the Halloween

party and Winterfest and finally, our Distinguished Visitors.  The third module, Faculty

and Staff will include photographs and names of each ACSC department.  The fourth

module, Mugshots, will include official photographs of all the 1998-1999 ACSC

students.    The fifth module, Seminar, will include photo excerpts of seminar

extracurricular and classroom activities.    The sixth module, is the Index for the

multimedia yearbook.  I have divided the index into two sub-categories.  The first sub-

category contains all the names in alphabetical order and the second contains all the

countries represented at ACSC.  The seventh and final module, Advertisements, will

contain all the web pages for those companies that have purchased advertising space

within the multimedia yearbook.

# Chapter 1

# Classes, Literature and Software Review

Having never used HyperText Markup Language (HTML) prior to starting this endeavor, I had a tremendous learning curve ahead of me. To aid in this learning process, I immediately registered for the initial offering of Air Command and Staff College's (ACSC) HTML course. This course was a six-hour seminar whose main purpose was to introduce a beginner to the basic formats and capabilities of HTML and Luckman's WEBEDIT® (version 2.0). WEBEDIT® is a Microsoft's® Windows based web page editor. At the conclusion of this course, students understood the basic HTML programming language nuances of creating web pages, adding images, video and audio files. In their closing remarks for this course, the instructors recommended Elizabeth Castro's book *HTML For The World Wide Web.* This book has proven to be an extremely valuable asset in reducing the learning curve for this project and for providing worthwhile examples to incorporate into a web page design.

The next step in the project was to identify other software applications that would be beneficial in this endeavor. Initially, I reviewed a PC Magazine article on *"Your Web Pages made Easy"* which reviewed 16 HTML editors and 16 graphics tools to help you create personal web pages. The article's recommendation was a free web editor from America Online® called AOLpress 1.2.3. In comparison to WEBEDIT®, I found

*WEBEDIT®* easier to use and decided *WEBEDIT®* would become my primary editor along with Microsoft®'s *NOTEPAD*, if necessary.

With a web editor selected the next step was identifying the equipment required to successfully complete this project. Since a majority of the images included in the final project would be the result of endless hours of photographing by the yearbook staff, I need to decide how I could pull these images into the software. Two options were available: first, as the staff developed their photographs they could have the processing shop produce a floppy disk version for minimal costs; second, we could use a scanner to acquire these images. The latter step was selected because I could ensure that all of the pictures were in the same format (size and quality) as well as realtime cropping to save only the desired portion. To assist in this effort, I purchased a Microtek*® SCANMAKER 310*. With the scanner, I acquired three photograph editors: MicroFrontier *COLOR IT!,* Metatool's® *Kai's Photo Soap™* and Ulead Systems™ i*Photo Express*, version 2. These applications assist in image retouching and editing. Since my desire was to ensure I used the easiest applications with the greatest flexibility, I purchased a graphic suite of software from America Online called *America Online's® Graphic Suite*. This suite of software contained applications dedicated to helping create web effects, manipulate images and photo storage.

As a final step, on the recommendation of a number of web page articles and a web page editor, I looked at Adobe's® *Photoshop®* versions 4.0 and 5.0. This application is an extremely powerful graphics program, which aids in photo-retouching and image manipulation. In addition to the image manipulating software, I found there were multiple plug-in applications available on the World Wide Web for additional imaging

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effects.  For example, Extensis® offers numerous demonstration, plug-in application versions available, such as, *PhotoFrame, PhotoGraphics, Photo Text Solo,* and *PhotoTools.*  Each plug-in provides a different enhancement to the digital images. The plug-in applications are easy to use applications that provide the web editor the ability to add effects to digital images.

All of these products were used at various points in the creation of this multimedia software package.

# Chapter 2

# Application Overview

Throughout the in-residence academic year at Air Command and Staff College numerous official and extracurricular activities take place which are memory makers for our year of phase one in Joint Professional Military Education. I have divided these events into what I believe is a logical grouping for easy access by the user of this multimedia product. In addition to the extracurricular activity photographs, I have added those which I believe the users of this application desire—chain of command photographs, classmate's "official" photographs or mugshots and photographs of the school's Command Section, Faculty and Staff. The different divisions of this virtual yearbook are Chain of Command, Shining Moments, Faculty and Staff, Mugshots, Seminars, Index and Advertisements.

## Chain of Command

This first section in this multimedia application covers the subordinate to superior succession of commanding officers for students at Air Command and Staff College (ACSC). The Chain of Command section includes photographs of Air Command and Staff's Commandant, Brigadier General (Select) John J. Rosa, Jr.; Air University's Commander, General Joseph J. Redden; Air Education and Training Command's Commander, Lloyd W. Newton; Air Force Chief of Staff, General Michael E. Ryan;

"Acting" Secretary of the Air Force, the Honorable F. Whitten Peters; Chairman, Joint Chiefs of Staff, General Henry H. Shelton; Secretary of Defense, the Honorable William S. Cohen; and the Commander-in-Chief, President William J. Clinton.

## Faculty and Staff

This section will include the group photographs of ACSC's Command and Staff and ten department photographs. Each individual represented in the Faculty and Staff section will also be identified within the application's Index section.

## Mugshots

This section will include the "official" photographs of the 596 students attending Air Command and Staff College, Academic Year 1999. Each student photograph contains their country's flag in the background. Authorization to use these professional photographs was included in the contract this year's yearbook staff signed with the commercial photographer.

## Seminar

The design of this section is similar to the hard copy version of the AY99 ACSC Yearbook. ACSC divided 596 students representing the United States Air Force, United States Navy, United States Army, United States Marine Corps, Air National Guard, Air Force Reserve, Department of Defense Civilians and foreign military officers representing 64 countries into 44 seminars. Each seminar is comprised of 13 to 14 students. Each seminar selected a yearbook representative who provided photographs that they thought would best reflect the activities and special events they experienced

throughout the academic year.  The advantage to the yearbook's soft copy version is emphasized here in the opportunity to include more photographs than those allocated in the two pages of the hard copy yearbook.

## Shining Moments

This section is the largest portion of the multimedia application representing an overview of the entire ten-month school year.  Included in this section will be photographs representing the indoctrination, curriculum courses, distinguished guest speakers, "official" functions, gala events, including Marine Corps Ball, Navy Ball, Graduation Ball, holiday parties, Wood Auditorium events, Gathering of Eagles, Graduation, Distinguish Graduates, research award winners and world events.

## Index

This section was created to simplify the man-machine interface of this application. The index will be sub-divided into two sections: "by name" and "by country."  The "by name" index will allow users to alphabetically search names of any student, faculty or staff member.  Once the application user finds the desired individual, the application provides a hyper-link to either the individual's mugshot, department photograph, seminar photographs both for student mix #1 (August to January) and student mix #2 (January to June), or a combination of these options, if available.  The "by country" index will allow users to alphabetically search the list of 64 countries represented during this academic year and hyper-link to the student's mugshot and seminar photographs.

## Advertisements

This portion of the application is our "bread and butter." The advertising companies that have purchased space or provided services at a reduced price in exchange for free advertising are located in this section of the multimedia yearbook. The web pages used in this section were produced by either the company purchasing the advertisement space or the contractors hired by the ACSC AY99 Yearbook staff for acquiring both local and national advertisers.

# Chapter 3

# Development System

The AY99 ACSC multimedia yearbook application was created using a Hewlett Packard HP Pavilion 6470z.  This computer system comprises an Intel® Pentium II 400 MHz processor with 100MHz system bus, Iomega 100MB Zip Drive, Digital camera port, 96MB SDRAM memory and 8MB ATI Rage Pro turbo graphics video card.  Since this application was created on a leading edge computer system, I was extremely concerned with its ease of use and appearance on other systems.  To ensure maximum quality across a variety of systems, I have tested the application on other windows based computer systems, including the desktop computer systems at Air Command and Staff College.  The software application when initiated by the user checks to see if the user is running the latest version of Microsoft® Internet Explorer (IE) or Netscape® as well as notifications for system modifications to maximize viewing pleasure.

A primary concern when developing web pages is the time it takes for uploading web pages, web graphics and web images.  Since this application will be published and distributed on a CD-ROM, speed was not as great a concern as if we had used the World Wide Web as a transmission medium where modem speed would play a major factor. However, I still focused on image size and upload time to maximize the viewing pleasure of the end user. Size limitations for an ACSC technology project has previously been

established at no greater than 50 megabytes.  From the very beginning ACSC research

staff, specifically Dr. Abby Gray, recognized the uniqueness of this project and waved

the size limitation up to what could be included on a single CD-ROM.

# Chapter 4

# Lessons Learned

In order to ease the development of this type of application in the future, I believe it is important to identify some very important lessons learned during the development of this technology project.

First, I recommend the developers quickly identify any commercial audio or video clips they may wish to use in the product. Though many of the individuals I contacted were quick to respond and more than willing to grant copyright authorization for the use of their files, others took many months to track down the correct individual or group with the authority to grant copyright authorization in the future.

Second, during the conceptual phase of your development, it is very important to conduct an application review to identify, as many as possible, the limitations of the applications you may be using. An example of this is my desire to use transparent GIF files. The applications I was using did not provide an easy way to convert my images from JPEG format into transparent GIF. I finally identified a shareware program, MagicViewer that was able to handle the conversion easily but the final product was not as crisp as I would have preferred.

A final lesson learned is this project is extremely dependent upon the timeline established for the hardcopy yearbook. Good communication and teamwork between the

yearbook staff producing the hardcopy version and the staff producing the softcopy

version is critical to the success of this type of application.  I was extremely fortunate that

all of the members of the yearbook staff and the Division's photographers were focused

not only on their timeline and tasks but mine as well.  From the very beginning the entire

staff wanted to ensure we succeeded on both products.

# Chapter 5

# Distribution

The ACSC AY99 Multimedia Yearbook will be available to anyone purchasing a copy on the Compact Disk–Read Only Memory (CD-ROM).  The focus group for this application is the faculty, staff and students at ACSC during the 1999 Academic Year. The final cost for each copy of the application will be determined based on best price and delivery schedule from contractors provided by ACSC.  The Air Command and Staff College's Distant Learning department recommended the following contractors for the reproduction of the CD-ROM: Total Printing, Eva Tone, and Telestar.

Total Printing was selected due to its price and past performance with ACSC.  Total Printing has agreed to produce the CD-ROM for a cost per unit of $3.50.  This cost includes cutting a "glass" original of the product, a two-page graphic insert, jewel case, and mailing to each purchaser.  Following commencement activities, I will complete the multimedia application and deliver to Total Printing for "burning" the CD-ROMs.  Once completed the CD-ROMs will be distributed (final decision on distribution mechanism, pending) to all customers.  In addition to those purchasing copies of the multimedia application, copies will be provided to the school for historical purposes.

# Chapter 6

# Conclusions

This multimedia yearbook provides faculty, staff and students at Air Command and Staff College during the 1999 academic year an easy to use and extremely portable set of memorabilia.   Hopefully, the lessons learned and the feedback received on this technology project will allow this project to be continued in forthcoming years.   This project is time consuming for the novice web page editor but well worth the effort involved in producing the final end product.   I believe this end product is one Air Command and Staff College will be proud to showcase for years to come and will be just the beginning down a new avenue for publishing the academic yearbook.   In addition to using this media for academic yearbooks, I believe this type of product will open the door to showcase  Air University academic schools and individual courses to allow "potential" students greater insight in what the school offers and what to expect upon arrival.   The melding of audio, video and still photography to capture a individual's attention and entice them to attend these austere educational courses is unlimited.

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