

**Multimedia Sales Presentation with Database Connectivity  
for Trek Alliance Incorporated**

By

Henry W. Glaspie IV

Submitted to  
the Faculty of the Information Engineering Technology Program  
in Partial Fulfillment of the Requirements for  
the Degree of Bachelor of Science in  
Information Engineering Technology

University of Cincinnati  
College of Applied Science

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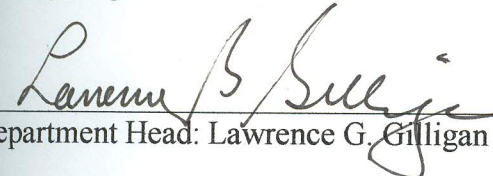
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3-6-01  
Date

  
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3/13/01  
Date

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# Table of Contents

Section	Page
Acknowledgements	i
Table of Contents	ii
List of Figures	iii
Abstract	iv
1. Statement of the Problem	1
2. Solution Description	3
2.1 User Profile	3
2.2 Design	4
2.3 Access Features	6
2.4 PowerPoint Features	6
3. Project Objectives	8
4. Design and Development	9
4.1 Budget	9
4.2 Timeline	9
5. Proof of Design	11
5.1 Product Testing	11
5.2 Usability	11
5.3 Database Connectivity	12
5.4 Portability	12
6. Conclusions and Recommendations	12
Appendix A	
Visual Basic for Applications Code	14
References	20

## List of Figures

- |   |   |
|---|---|
| Figure 1. Flow chart showing program connectivity.      | 5 |
| Figure 2. Start-up Form/Main Menu.                      | 6 |
| Figure 3. PowerPoint slide with video interface button. | 7 |
| Figure 4. PowerPoint slide showing completed animation. | 8 |

## Abstract

Trek Alliance Incorporated is a nationwide sales and marketing company based in Lake Tahoe, California. The company markets and sells health, fitness, and environmentally friendly consumable products. Trek Alliance is a direct sales organization that relies on sales presentations to distribute its products and recruit independent sales representatives. The sales presentation, and contract processes have been manual "pen and paper" processes with the sales presentations given on white boards in company sales offices. With the company's planned expansion through the Midwest to the East Coast, there is a need for a mobile, interactive sales presentation. This would allow independent sales representatives with little experience to take the company knowledge and presentations, given at in-office briefings, on the road. I have developed an executable program that will give a multimedia presentation that is interactive and will allow a sales representative to give sales briefings in areas where there is no office or where the client does not find traveling convenient. The program contains the database connectivity needed to construct and print professional contracts for printing on location.

# Multimedia Sales Presentation with Database Connectivity for Trek Alliance Incorporated

## 1. Statement of the Problem

Trek Alliance, Incorporated is a nationwide sales and marketing company based in Lake Tahoe, California. The company markets and sells health, fitness and environmentally friendly consumable products. Trek Alliance opened for business in September 1997 and has gradually expanded to the East Coast. It is a direct sales organization that relies on sales presentations to distribute products and recruit independent sales representatives. The sales presentation is a critical part of process. It provides information about the background of the company, the direct sales industry and the consumer product lines. The end of the presentation is the close, which is persuasive and designed to compel the client to act.

Trek Alliance is a major force in the direct sales industry (1, p. 50). It markets and sells consumable products for home and business use. Trek Alliance's ultimate goal is for its products to be a part of every household in the United States and internationally. International consumable product sales are what makes the direct sales industry one of the few industries today that is expanding rather than downsizing. The sales strength of the company is the 20,000 independent representatives who use the 41 offices currently operating across the country. Independent sales representatives bring clients to company and product overviews where experts in the sales presentation and product knowledge give scheduled presentations. The majority of these offices are in the western part of the country. There are seven offices east of Indianapolis. They are in Cincinnati, Columbus, Washington D. C., Baltimore, Boston, Tampa and Orlando. This leaves major parts of

the eastern United States without offices. The sales briefings are both visual (with videos, written illustrations and product samples to introduce the product lines and show their benefit to consumers and the environment) and interactive, allowing potential customers and clients to actively listen by asking questions and responding to the speaker. Lack of offices in every metropolitan area poses a problem when penetrating those sales markets. According to *Network Marketing Lifestyles*, a leading journal on the direct sales industry, the number one reason why independent sales representatives fail is due to the lack of support and organization in their local market. This is a key concern in an industry that is founded on word-of-mouth advertising to recruit sales representatives and retail products. I spoke with the company president, Kale Flagg, at the annual company awards celebration in Reno, Nevada; he stated that he was currently taking bids from other technology companies to solve this problem but would not act until I submit my solution (2).

Technology has improved to the point that multimedia presentations are standard sales and marketing tools. They are used in education, kiosks, and sales briefings in every industry. Trek Alliance provides VHS videotape versions of the sales briefing and product documentation, but just showing a video is an impersonal approach to a direct sales organization founded on building personal relationships. The videotape also requires the sales rep to travel with a TV and VCR, which requires access to a standard 110V power source. The company has not developed an interactive presentation that allows the independent representative to adapt the presentation to the audience. Mr. Flagg has agreed that there is a need for a tool that will allow an independent sales

representative to take the knowledge and presentations given at the in-office briefings on the road (2).

## **2. Solution Description**

An executable program that gives an interactive multimedia presentation to allow a sales representative to increase sales in areas where there is no office or where the client does not find traveling convenient. The program possesses the database connectivity needed to print completed contracts and invoices to help sales representatives recruit and/or complete the sale. This program will be distributed on a CD-ROM and will be designed to run on a Windows 95 operating system. The Windows 95 operating system is being used as the basic operating platform to allow the sales representatives to use a wide variety of laptops or personal computers regardless of their hardware specifications.

### **2.1 User Profile**

The users of this tool will be the independent sales representatives of Trek Alliance who will be delivering a sales presentation in a one-on-one or small group setting. This tool will benefit all users whether they are experienced in the industry, the company, or in sales. By providing video documentation, computerized forms and presentation materials, the software will give the information, show the professionalism and provide the organization needed to close the sale.

Computer literacy is not a big concern for using this tool. The user only needs a basic understanding of how to start a program from a disk, navigate a PowerPoint presentation and follow "point-and-click" navigation cues. The software will be written for ease of use. The required software to run the program is Microsoft Access 2000 and Microsoft PowerPoint 2000. These software packages are bundled together in Microsoft

Office 2000. The only hardware requirement is a computer (laptop or PC) with Windows 95, a CD-ROM, and a portable printer.

## 2.2 Design

Ease of use, portability, and professional output were the driving factors in my design. Because of this, I chose to use the most common and readily used business products like Microsoft Office 2000 and Microsoft Windows for development.

Interactivity between the products was also important because the program is started in Microsoft Access 2000 and needs to have the ability to switch over the Microsoft PowerPoint 2000 for the sales presentation. Figure 1. shows the flow chart of the elements in the program and the need for interconnectivity between the programs.

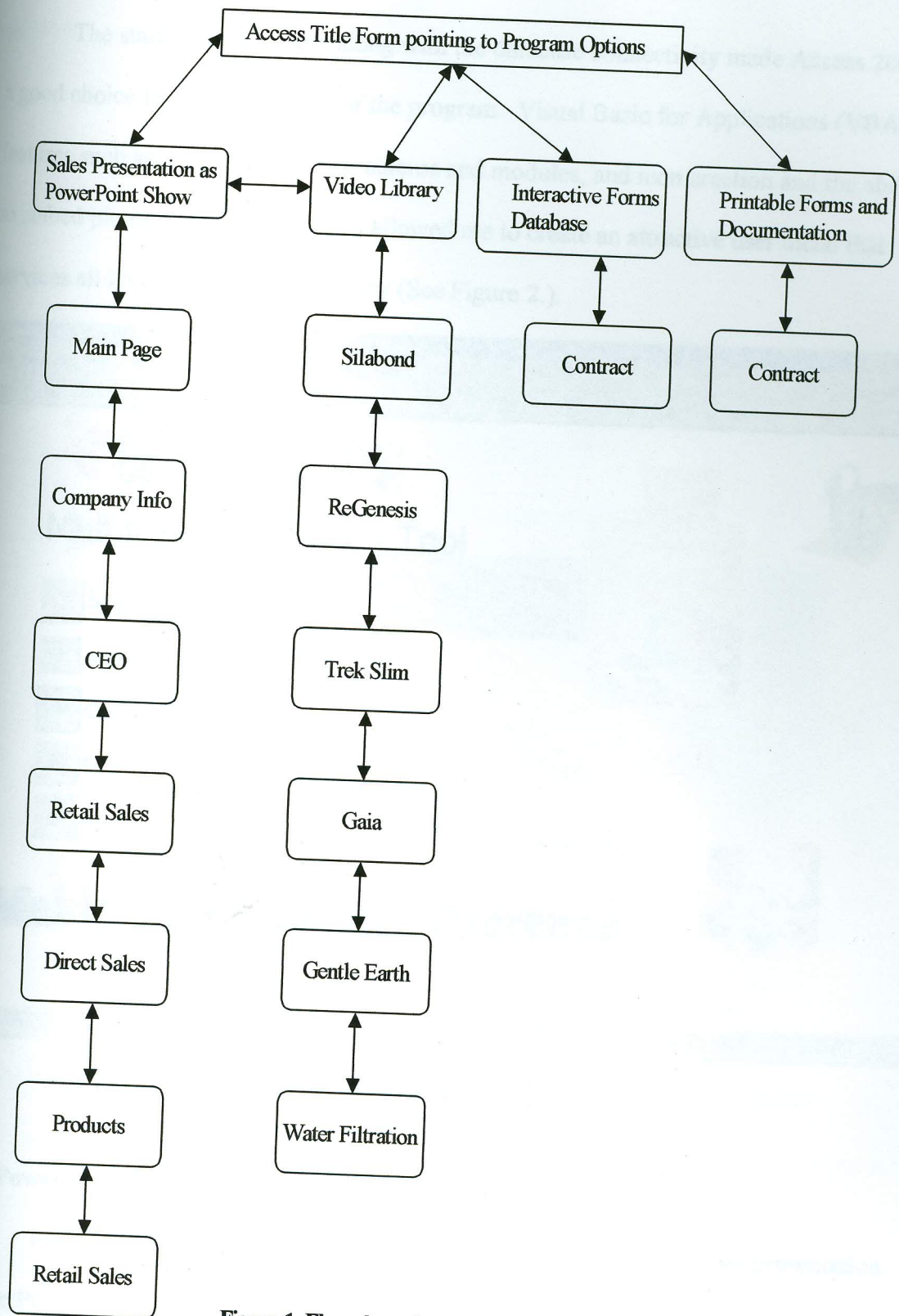


Figure 1. Flow chart showing program connectivity.

### 2.3 Access Features

The startup form feature along with the database connectivity made Access 2000 a good choice for the foundation of the program. Visual Basic for Applications (VBA) features such as command buttons, macros and modules, and icon creation and the ability to embed pictures on the user forms allowed me to create an attractive user menu that services all levels of computer literacy (See Figure 2.).

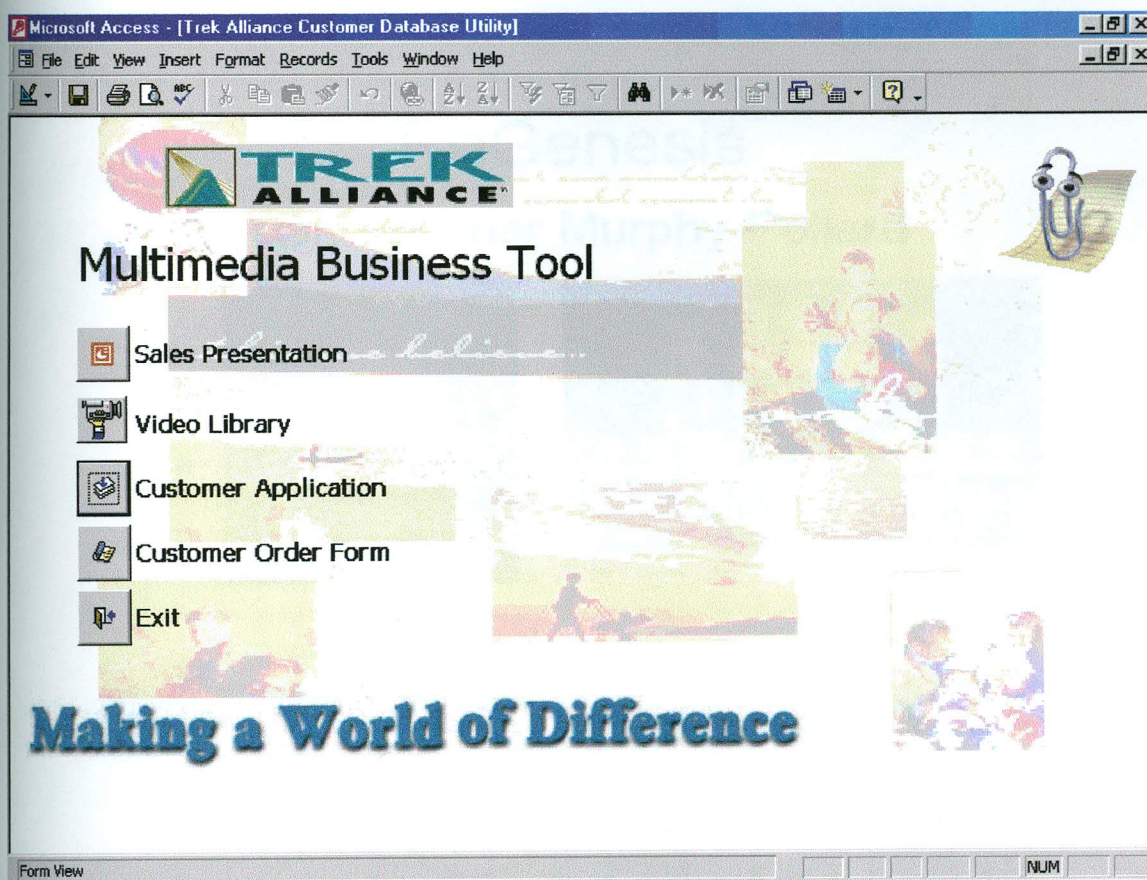


Figure 2. Start-up Form/Main Menu

### 2.4 PowerPoint Features

Microsoft PowerPoint 2000 was used to create and deliver the sales presentation. PowerPoint provides the interactivity, ease of use, and animation tools necessary to create a sales presentation that will keep the audience's attention and deliver the company

message. Videos are used as supporting media for the sales presentation. They are not meant to be shown in each presentation but can be necessary when the customer is interested in a specific product line. The action settings in PowerPoint allow the user to receive the video at the click of a button. In the product portion of the presentation, individual slides have buttons with movie camera icons that denote the ability to play video (Figure 3.).

## ReGenesis

Dr. Heather Murphy-Pollard



Click for Video



**Figure 3. PowerPoint slide with video interface button**

PowerPoint's animation features also help the user deliver a more interesting and captivating presentation. The animation used in this program highlights the positives of the company, direct sales industry, and the compensation plan while showing the dramatic elimination of those things counter to the company's success. Figure 2. shows.

the end result of an animation sequence illustrating the benefits of direct sales over retail sales.

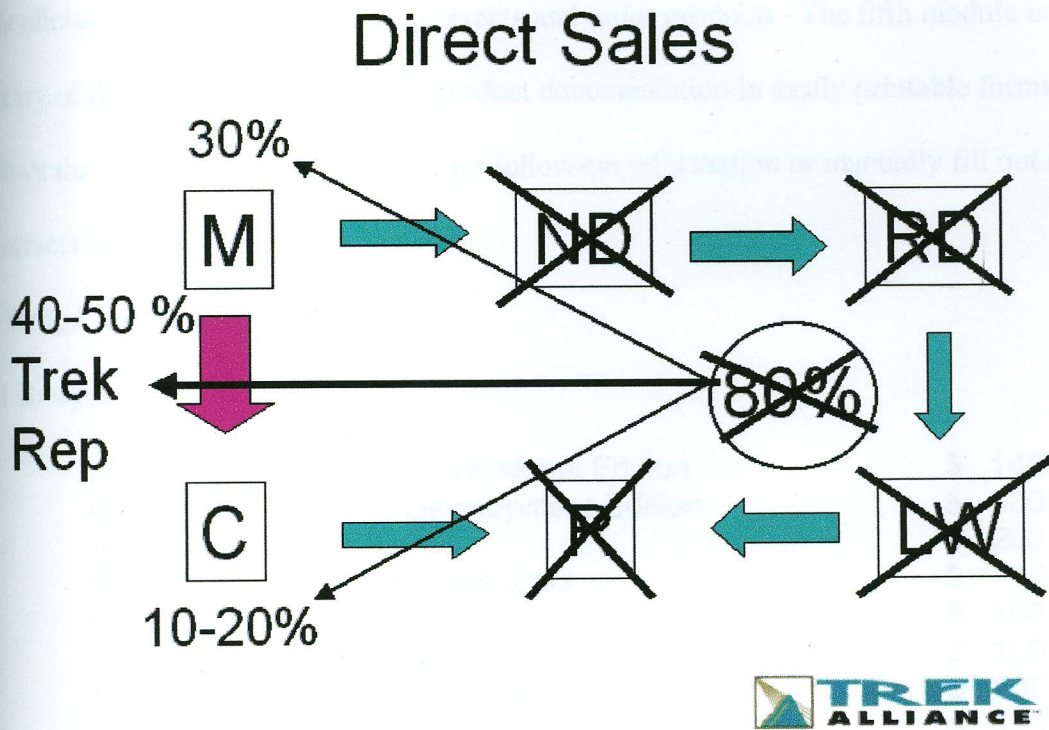


Figure 4. PowerPoint slide showing completed animation

### 3. Project Objectives

The goal of this program is to provide the user with a multimedia sales presentation tool, product database connectivity with sales forms, video documentation of product information and printable forms for customer copies and documentation, and manual completion if necessary. These objectives are met through five separate modules. The first module is a PowerPoint presentation that allows the user to provide visual display to support the oral presentation about the industry, the company and the products.

The video library is a module that can be used to provide in-depth, factual, and amplifying information about the different products that the company provides. The database actually contains two modules. One is a database of products, business tools and prices. The other is a collection of forms with connectivity to the products and prices that allows the user to create sales contracts and order products. The fifth module is a library of the forms, documents and product documentation in easily printable format that allows the sales rep to give the customer follow-on information or manually fill out sales contracts and order forms.

#### 4. Design and Development

##### 4.1 Budget

Microsoft Office 2000 Professional Edition	\$ 149.00
Microsoft Office 2000 Development Edition	\$ 430.00
Visual Basic 6	\$ 280.00
Maxell CD-R blank compact disks	\$ 14.00
Video Capture Card	\$ 109.00
Video Cassette Recorder	\$ 109.00
Development Laptop Computer	\$1,500.00
CD-ROM Re-writable	\$ 179.00
Iomega Zip Disks (pack of 10)	\$ 85.00
<hr/>	
Total Budget	\$2,855.00

##### 4.2 Timeline

A. Senior Design I – Research, design, study of development tools.

March 27 - April 19: Definition of Problem, Feasibility Analysis.

April 19 - May 10: Requirements Definition, Advisor Guidance.

May 10 - May 31: Design, Final Proposal, Oral Presentation.

B. Summer Co-op Quarter – Research, design, organization of development tools.

June 19 - August 31: Access Database Design, PowerPoint Presentation Design, and Visual Basic Shell Design.

C. Senior Design II – Finalize design, production of working prototype.

Oct 11 - Creation of Printable Forms in PDF format.

Oct 18 - Image Scanning and Editing.

Oct 25 - Video Digitization

Nov 1 - Database Completion

Nov 8 - Form Design

Nov 15 - Forms/Database Connectivity

Nov 22 - Visual Basic Shell

Nov 29 - Oral Presentation/Proof of Concept

Dec 6 - Oral Presentation/Proof of Concept

D. Senior Design III – Complete functionality and coding, demonstrate working program.

Jan 3 - Coding and completing Functionality

Jan 10 - Coding and completing Functionality

Jan 17 - Interconnectivity of Modules

Jan 24 - Interconnectivity of Modules

Jan 31 - Final Acceptance Testing on Development Platform.

Feb 7 - Final Acceptance Testing on various Desktop PC's.

Feb 14 - Final Acceptance Testing on various Laptop Computers.

Feb 21 - Final Acceptance Testing in Workplace

Feb 28 - Preparation of Oral and Written Presentation.

Mar 2 - Project Delivery.

## **5. Proof of Design**

### **5.1 Product Testing**

The software was tested from Monday, January 29, 2001 through Friday February 23, 2001. With the wide variety of commercially available computing platforms, I tested the program under many different conditions. I used three different laptops (Toshiba Satellite Pro CS 430, Dell Latitude CP, Compaq Armada 7700) and five different PC's ranging in processor speed from 166 MHz to 500 MHz and memory size of 32 MB to 196 MB. Testing platform operating systems included Microsoft Windows 95, 98 Second Edition, and Windows Millennium. This allowed me to have a more inclusive view of potential user's platforms.

### **5.2 Usability**

The testers were given the software to run on their systems and were asked to navigate through the menu options. Only one of the eight testers was familiar with Trek Alliance and only three of the eight testers used computers daily for work or for pleasure. All of the test subjects were pleased with the overall effectiveness of the program and were impressed with the multimedia and animation aspects of the presentation. They felt that using the animation to highlight key points of the presentation and the use of video to give in-depth product information, really held their attention. As for ease of use, the testers thought the program was easily navigated and the large font, pictures, and buttons were easily recognizable.

### **5.3 Database Connectivity**

Professionalism is important to a sales organization. The database connectivity tools allow the user ease in inputting information and are necessary in creating an organized contract and invoice for the customer. Whether giving a formal sales briefing or meeting a client for a follow-up meeting, the program leaves a good impression.

### **5.4 Portability**

Designing the program primarily on a laptop computer allowed for portable platform versatility. The portable testing platforms had different screen sizes and screen and video card types. This required the program to conform to reasonable user interaction factors such as format, video playback size, and text. When testing the portability, the program was able to run on the laptops and print on the portable printer while both devices were plugged into the cigarette lighter plug of a 1999 Dodge Caravan.

## **6. Conclusions and Recommendations**

This software can be expanded. There are many variations, improvements and upgrades that can be made. During the design phase, I realized that to meet every need of the company, I would need a development team with more time and resources. Including all of the company's business forms and linking them to the customer information via the database connectivity would have improved the project.

The software was written inside the Microsoft Access 2000 application using Visual Basic for Applications (VBA) as the programming language. Using Visual Basic 6.0 would have provided a cleaner delivery of the Microsoft Access and Microsoft PowerPoint modules to the user's computer. Even though VBA is a version of Visual Basic 6.0, I was unable to take advantage of the powerful programming features like

automatic file detection, executable program installation, connectivity to more functional form creation software for contracts and invoices, and the ability to launch Microsoft PowerPoint 2000 from Microsoft Access 2000.

Because the intended users of this product have the potential to use vastly different computing platforms, more testing needs to be conducted. Slight changes in the hardware and software configuration of the different platforms tested had a great effect on the software in the initial testing phase. This required modifications in the coding of the modules to account for this variance.

## Appendix A

This is the Visual Basic for Applications (VBA) code I wrote for the Video Library Form. Note that the API calls were built in to the software and I integrated them from the MSDN Library and from the [www.vbsquare.com](http://www.vbsquare.com) website.

### Video Library Form Code:

This code is attached to each button that launches the product video from Microsoft Access 2000. The `GetDriveType` and `GetLogicalDriveStrings` functions work with the `GetFirstCdRomDriveLetter()` function to locate the exact path of the CD-ROM drive on the computer platform that is running the program. The `mciSendString` function finds the default media player that can launch my videos with .avi extensions. This code was necessary because it was discovered in testing that not all PC owners conventionally name their CD-ROM drive letters D, E, or F. The functions allow me to find the drive letter and launch the application. The code is listed below:

```
*****
'
' FUNCTION:
'   GetFirstCdRomDriveLetter()
'
' PURPOSE:
'   Finds the first CD-ROM device and then returns its drive letter.
'
' ARGUMENTS:
'   None
'
' RETURNS:
'   A string that represents the first CD-ROM drive letter. If the
'   function fails for any reason, it returns vbNullString.
'
*****

Private Declare Function GetDriveType Lib "kernel32" Alias _
    "GetDriveTypeA" (ByVal nDrive As String) As Long
```

```
Private Declare Function GetLogicalDriveStrings Lib "kernel32" Alias _
    "GetLogicalDriveStringsA" (ByVal nBufferLength As Long, _
    ByVal lpBuffer As String) As Long
```

```
Private Declare Function mciSendString Lib "winmm.dll" Alias _
    "mciSendStringA" (ByVal lpstrCommand As String, ByVal _
    lpstrReturnString As String, ByVal uReturnLength _
    As Long, ByVal hwndCallback As Long) As Long
```

```
Private Const DRIVE_CDROM As Long = 5
```

```
Function GetFirstCdRomDriveLetter() As String
```

```
    ' Declare variables.
```

```
    Dim lDriveType As Long
```

```
    Dim strDrive As String
```

```
    Dim lStart As Long: lStart = 1
```

```
    ' Create a string to hold the logical drives.
```

```
    Dim strDrives As String
```

```
    strDrives = Space(150)
```

```
    ' Get the logical drives on the system.
```

```
    ' If the function fails it returns zero.
```

```
    Dim lRetVal As Long
```

```
    lRetVal = GetLogicalDriveStrings(150, strDrives)
```

```
    ' Check to see if GetLogicalDriveStrings() worked.
```

```
    If lRetVal = 0 Then
```

```
        ' Get GetLogicalDriveStrings() failed.
```

```
        GetFirstCdRomDriveLetter = vbNullString
```

```
        Exit Function
```

```
    End If
```

```
    ' Get the string that represents the first drive.
```

```
    strDrive = Mid(strDrives, lStart, 3)
```

```
    Do
```

```
        ' Test the first drive.
```

```
        lDriveType = GetDriveType(strDrive)
```

```
        ' Check if the drive type is a CD-ROM.
```

```
        If lDriveType = DRIVE_CDROM Then
```

```

' Found the first CD-ROM drive on the system.
GetFirstCdRomDriveLetter = strDrive
Exit Function
End If

' Increment lStart to next drive in the string.
lStart = lStart + 4

' Get the string that represents the first drive.
strDrive = Mid(strDrives, lStart, 3)

Loop While (Mid(strDrives, lStart, 1) <> vbNullChar)

End Function

Private Sub Command1_Click()
'
' Macro created 2/25/01 by Glaspie
'

Dim strDriveLetter As String
Dim returnstring As String
Dim FileName As String

' Call the GetFirstCdRomDriveLetter() and store the
' return value in strDriveLetter.
strDriveLetter = GetFirstCdRomDriveLetter()
returnstring = Space(127)
'Avifile to play

FileName = strDriveLetter & "Silabond.avi"
erg = mciSendString("open " & Chr$(34) & FileName & _
Chr$(34) & " type avivideo alias video", returnstring, _
127, 0)
erg = mciSendString("set video time format ms", _
returnstring, 127, 0)
erg = mciSendString("play video from 0", returnstring, _
127, 0)
erg = mciSendString("close video", returnstring, 127, 0)

End Sub

Private Sub Command2_Click()
'
' Macro created 2/25/01 by Glaspie
'

```

```
Dim strDriveLetter As String
Dim returnstring As String
Dim FileName As String
```

```
' Call the GetFirstCdRomDriveLetter() and store the
' return value in strDriveLetter.
strDriveLetter = GetFirstCdRomDriveLetter()
returnstring = Space(127)
'Avifile to play
```

```
FileName = strDriveLetter & "GentleEarth.avi"
erg = mciSendString("open " & Chr$(34) & FileName & _
Chr$(34) & " type avivideo alias video", returnstring, _
127, 0)
erg = mciSendString("set video time format ms", _
returnstring, 127, 0)
erg = mciSendString("play video from 0", returnstring, _
127, 0)
erg = mciSendString("close video", returnstring, 127, 0)
```

```
End Sub
```

```
Private Sub Command3_Click()
Dim strDriveLetter As String
Dim returnstring As String
Dim FileName As String
```

```
' Call the GetFirstCdRomDriveLetter() and store the
' return value in strDriveLetter.
strDriveLetter = GetFirstCdRomDriveLetter()
returnstring = Space(127)
'Avifile to play
```

```
FileName = strDriveLetter & "Gaia.avi"
erg = mciSendString("open " & Chr$(34) & FileName & _
Chr$(34) & " type avivideo alias video", returnstring, _
127, 0)
erg = mciSendString("set video time format ms", _
returnstring, 127, 0)
erg = mciSendString("play video from 0", returnstring, _
127, 0)
erg = mciSendString("close video", returnstring, 127, 0)
```

```
End Sub
```

```
Private Sub Command4_Click()
```

```
' Macro created 2/25/01 by Glaspie
```

```
Dim strDriveLetter As String
```

```
Dim returnstring As String
```

```
Dim FileName As String
```

```
' Call the GetFirstCdRomDriveLetter() and store the  
' return value in strDriveLetter.
```

```
strDriveLetter = GetFirstCdRomDriveLetter()
```

```
returnstring = Space(127)
```

```
'Avifile to play
```

```
FileName = strDriveLetter & "ReGenesis.avi"
```

```
erg = mciSendString("open " & Chr$(34) & FileName & _  
Chr$(34) & " type avivideo alias video", returnstring, _  
127, 0)
```

```
erg = mciSendString("set video time format ms", _  
returnstring, 127, 0)
```

```
erg = mciSendString("play video from 0", returnstring, _  
127, 0)
```

```
erg = mciSendString("close video", returnstring, 127, 0)
```

```
End Sub
```

```
Private Sub Command5_Click()
```

```
' Macro created 2/25/01 by Glaspie
```

```
Dim strDriveLetter As String
```

```
Dim returnstring As String
```

```
Dim FileName As String
```

```
' Call the GetFirstCdRomDriveLetter() and store the  
' return value in strDriveLetter.
```

```
strDriveLetter = GetFirstCdRomDriveLetter()
```

```
returnstring = Space(127)
```

```
'Avifile to play
```

```
FileName = strDriveLetter & "TrekSlim.avi"
```

```
erg = mciSendString("open " & Chr$(34) & FileName & _  
Chr$(34) & " type avivideo alias video", returnstring, _  
127, 0)
```

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