Conquest of the Stars: A Strategy Simulation

An Honors Thesis (HONRS 499)

by

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Motivation/Purpose of Thesis

The idea behind this project has two components: to create a new type of strategy game and to simplify the record keeping involved with such a game. Many aspects of this project already exist as small parts of existing strategy games. This project combines many of those elements, such as a hexagonal movement system from games such as Military Madness (TurboGrafx-16) and Starfleet Battles (a pencil-and-paper game), varied types of combat units such as those found in WarCraft (PC), and turn-based style of play, found in Heroes of Might and Magic (PC). Similar, non-computerized games are typically long and time-consuming since a detailed game requires a great deal of record keeping.

I chose to write this game in Microsoft’s Visual Basic language since it facilitates a graphical user interface very well. The language makes it easy to create the “look and feel” of an application before any of the underlying code is written.
The Future of "Conquest of the Stars"

This game is still a work in progress. For a future version of the game, I would like to have a larger scale map. Players could move fleets around the map, and the battle, which currently makes up an entire game of Conquest of the Stars, would only be one step in the broader strategy. I believe this would make a longer, more involved, and more interesting experience. I would also like for players to be able to play from separate computers over a network or modem. In this way, parts of players' plans could be kept secret from each other, which would add an entirely new dimension to the game play.
Problems/Difficulties

Several of the main reasons behind this project also created obstacles to its completion. For example, a movement system based on a "grid" of hexagons rather than squares, was an important aspect of this project. This creates more maneuvering options and more varied strategy. It also made many calculations more complicated, however. The code for the Dist function shows this well. The lack of even rows and columns made figuring out distances and directions quite complex. To demonstrate, the following shows the logic that went into the code to compute the distance between two hexes:

*The problem with computing distances is that a ship moving in a straight line only moves up one "row" (row meaning the number of hexes away from the bottom of the map) for every two hexes it moves horizontally. This is because the rows are "staggered" vertically, as this diagram shows:

This requires a complex set of conditions to determine the distance between two hexes:

If the hexes are an even number of columns apart:

*If the number of rows separating the hexes is less than or equal to half the number of columns (Remember, the ship travels one row per two columns), then the distance is equal to the number of columns separating the two hexes. 

*Otherwise, the distance is equal to the number of columns between the two hexes, plus the number of rows minus half the number of columns.

(For example, if two hexes are four columns and three rows apart, then the distance is equal to four (the number of columns) plus one (three rows minus the two rows the ship already traveled while traveling four columns).)
If the hexes are an odd number of columns apart:

If the number of rows separating the hexes is less (but not equal to) half the number of columns rounded up, then the distance is equal to the number of columns separating the two hexes.

Otherwise, the distance is equal to the number of columns between the two hexes, plus the number of rows minus half the number of columns rounded down.

The Visual Basic language also created some difficulties. The language is entirely event-driven; that is, a certain action must be triggered by something the user does rather than an event within the software.
Background

It is the far-flung future. Mankind's dreams of reaching the stars have been realized. Peace and prosperity have reigned for centuries over the hundreds of worlds the human race has colonized. Known as the Alliance of Free Stars, these worlds have anything they need or want through technology or intergalactic trade

This peace has been disturbed of late, however. Pirate raids, once an almost unheard of threat, have been increasing to the point where they are almost common. Besides the increase in attacks, an unknown leader has stepped up and moved to unite the scattered pirate groups. Known only as the Syndicate, the group has increased in strength more rapidly than anyone believed possible.

Having known no war for over four centuries, the Alliance has gathered its best leaders together. Each world is retrofitting what ships it can with any weapons at hand. The galaxy is gearing up for war...

This game is a simulation of small-scale combat between groups of ships from these two warring powers. One player takes the part of the Alliance of Free Stars, the other takes the Syndicate. By customizing a fleet of ships from each side of the conflict, a battle which will determine the course of events for the galaxy's future ensues...
Shields

Every ship has shields, which act like a "fire line" to prevent incoming weapons fire from damaging the ship. These shields are generated by powerful batteries on the ship, and the strength of the energy shield varies between ship types. Once a shield has absorbed more damage than its maximum strength rating, the shield overloads and fails. Any further weapons directed at the side of the ship where the shield fell will damage the ship itself. If the ship's Hull bar (see the ship display screen for details) is reduced to zero, the ship is destroyed. Shields are measured in units called Blast Rating points, which are useful for comparing their relative strengths. One Blast Rating point is equal to the amount of force necessary to penetrate one centimeter of armor.

Weapons

Each ship also has an array of weapons with which to defend itself. Depending on its type, each weapon is capable of doing a set range of damage to shields (or the hull) of a ship. Each ship also has a field of fire. This is the angle (in degrees) at which the weapon can fire. For example, a weapon with a field of fire of 0 – 120 could fire at other ships that were straight ahead of it, to the right and slightly behind, or anywhere in between.
Weapon Specifications

Rapid-Fire (RF) Laser
- Strength: Very Low
- Range: Medium
- Special: The rapid-fire laser can fire twice each turn. Cooling requires one complete phase between shots.

Phaser
- Strength: Medium
- Range: High
- Special: None

Heavy Phaser
- Strength: High
- Range: Medium
- Special: None

Anti-Matter Torpedo
- Strength: High
- Range: Low
- Special: None

Devastator Cannon
- Strength: Very High
- Range: Very Low
- Special: None
When the game starts, the Fleet Setup Screen will appear. When the Screen pops up, choose the number of credits each player will start with. The default value of 500 makes an average game. Choose more credits for a longer game, or fewer for a shorter game. Click the Done button in the top frame when this is done. Next, each player chooses which ships will make up his or her fleet from the choices that appear in the bottom half of the window. Click on the picture of a ship to purchase one of that ship. When both players have finished buying ships, click the Done button at the bottom of the screen. This will bring up the Map Screen.
The Map Screen shows the locations of each ship owned by the players. The ship whose turn it is has its hex outlined in yellow (see above). Also, when weapons are fired, the ships that are currently valid targets for that weapon will appear with the yellow outline.
The ship display screen provides an at-a-glance picture of your ship's current status. The bars next to the picture of the ship represent the strength of the ship's shields. Below picture, a box lists the ship's weapons, with the numbers that correspond to the picture. At the bottom of this box is the bar showing the strength of the ship's hull. Remember that if this bar is empty, the ship is destroyed.
Movement

Each turn is made up of ten phases. In each phase, some ships will be allowed to move one hex. Whether or not a ship can move during each phase is determined by its speed rating – the faster the ship, the more times per turn it will be allowed to move, up to a maximum of ten. Once all ships that are allowed to move have done so (or passed on their movement turn), all ships are given the chance to fire their weapons. This is because in reality, all the ships would be moving at the same time. Any ship may fire its weapons at the end of any phase, whether or not that ship was allowed to move during that phase.
Alliance Ships
Speeder Class

The “speeder” vessel is light, fast, and maneuverable. It is a modified scout-type ship. Despite light armor, designed to keep its mass down, the speeder has decent shielding and a pair of phasers to deter anyone who might think this little ship to be “easy pickings.”

Statistics:

- Weapons:
  - Two phasers (240 - 360) and (0 – 120)
- Shields:
  - 9 Blast Rating all sides
- Hull
  - 6 cm armor
- Speed: 10
Cruiser Class

The cruiser-class vessel is easily the most balanced ship available. Its speed, shielding, armor, and armament all rank about average in comparison to the other ships. One of its most useful features is a swiveling torpedo launcher that can fire in any direction.

Statistics:

- **Weapons:**
  - Torpedo Tube (300 degrees)
  - Heavy phaser (300 - 60)
  - Rear-mounted phaser (60 - 300)

- **Shields:**
  - 15 Blast Rating shields front
  - 12 Blast Rating all other sides

- **Hull**
  - 12 cm armor

- **Speed:** 6
Battleship Class

The battleship is the largest, toughest ship in the known galaxy. It is actually a type of cruise ship, fitted with the military resources of a small moon. It has more weapons, armor and shields than any other ship involved in the war. All this power does come at a price, however: it is also the slowest ship. The battleship can take a beating and keep on going, and it has versatile weapons that allow all sides of the ship to be covered by at least one weapon.

Statistics:

- **Weapons:**
  - Torpedo Tube (300 – 60)
  - Heavy phaser (240 – 120)
  - Two rear-mounted phasers (60 – 180) and (180 – 300)
- **Shields:**
  - 20 Blast Rating shields front
  - 18 Blast Rating all other sides
- **Hull**
  - 18 cm armor
- **Speed:** 2
Syndicate Ships
This ship is built for two things: speed and firepower. Shields and armor are fairly light, so be sure to keep out of enemy ships' way, but the fighter's speed allows it to fly circles around the larger, slower ships. This is the fastest ship available to the Syndicate, with twin rapid-fire lasers and a nose-mounted heavy laser for extra punch.

Statistics:

- **Weapons:**
  - Two rapid fire laser cannons, capable of firing twice per turn (240 - 360) and (0 - 120)
  - One heavy laser cannon (300 - 60)
- **Shields:**
  - 8 Blast Rating shields on all sides
- **Hull**
  - 7 cm armor
- **Speed:** 8
Gunship Class

The Gunship has been a mainstay of pirate attacks since long before the war started. It has a good balance of speed, defense, and firepower. Its bat-like shape has also been said to have a psychological effect on the pirates' potential victims before the battle even starts.

Statistics:

- **Weapons:**
  - Two heavy phasers (240 – 360) and (0 – 120)
  - Two rear-mounted phasers (120 – 180) and (180 – 240)
- **Shields:**
  - 14 Blast Rating front shield
  - 12 Blast Rating shields on all other sides
- **Hull**
  - 11 cm armor
- **Speed:** 6
Dreadnought Class

This is the ship that has struck fear in the hearts of all Alliance worlds. Besides defensive capabilities rivaling the Alliance Battleship, this ship carries the terrifying Devastator cannon, the most destructive weapon ever to be carried aboard a starship. Make sure to stay out of this weapon's line of fire!

Statistics:

- **Weapons:**
  - Devastator Cannon (300 – 60)
  - Two phasers (240 – 360) and (0 – 120)
  - Rear-mounted phaser (120 – 240)
- **Shields:**
  - 16 Blast Rating front shield
  - 14 Blast Rating shields on all other sides
- **Hull**
  - 15 cm armor
- **Speed:** 3
Private Sub Buy_Button_Click(Index As Integer)
    Dim dummy As Integer 'Variable for the global function to return
    Dim response
    If Index < 4 Then 'Player 1 is choosing a ship
        If Val(Money_Left_Label(1).Caption) < Val(Price_Label(Index).Caption) Then
            response = MsgBox("Not enough credits left!", vbOKOnly, "Ship Purchase")
            Exit Sub
        ElseIf Players(1).Num_Ships = 10 Then
            response = MsgBox("You have as many ships as you can", vbOKOnly, "Ship Purchase")
            Exit Sub
        Else
            Money_Right_Label(1).Caption = Str(Val(Money_Right_Label(1).Caption) - Val(Price_Label(Index).Caption))
            Num_Ships(Index).Text = Str(Val(Num_Ships(Index).Text) + 1)
        End If
    Else 'Player 2 is choosing
        If Val(Money_Right_Label(2).Caption) < Val(Price_Label(Index).Caption) Then
            response = MsgBox("Not enough credits left!", vbOKOnly, "Ship Purchase")
            Exit Sub
        ElseIf Players(2).Num_Ships = 10 Then
            response = MsgBox("You have as many ships as you can", vbOKOnly, "Ship Purchase")
            Exit Sub
        Else
            Money_Right_Label(2).Caption = Str(Val(Money_Right_Label(2).Caption) - Val(Price_Label(Index).Caption))
            Num_Ships(Index).Text = Str(Val(Num_Ships(Index).Text) + 1)
        End If
    End If
End Select
End If
End Sub
Private Sub Done_Button_Click()
    Pl1_Money_Combo.Enabled = False
    Pl2_Money_Combo.Enabled = False
    Done_Button.Enabled = False
    Money_Right_Label(1).Caption = Pl1_Money_Combo.Text
    Money_Right_Label(2).Caption = Pl2_Money_Combo.Text
    Buy_Button(1).Picture = LoadPicture(App.Path & "\speeder_icon1.bmp")
    Buy_Button(1).Enabled = True
    Buy_Button(2).Picture = LoadPicture(App.Path & "\cruiser_icon1.bmp")
    Buy_Button(2).Enabled = True
    Buy_Button(3).Picture = LoadPicture(App.Path & "\battleship_icon1.bmp")
    Buy_Button(3).Enabled = True
    Buy_Button(4).Picture = LoadPicture(App.Path & "\fighter_icon1.bmp")
    Buy_Button(4).Enabled = True
    Buy_Button(5).Picture = LoadPicture(App.Path & "\gunship_icon1.bmp")
    Buy_Button(5).Enabled = True
    Buy_Button(6).Picture = LoadPicture(App.Path & "\dreadnought_icon1.bmp")
    Buy_Button(6).Enabled = True
End Sub
Private Sub Done_Button2_Click()
    Dim response
    If Players(1).Num_Ships = 0 Or Players(2).Num_Ships = 0 Then
        response = MsgBox("Each player must have at least one ship to play.", vbOKOnly, "Setup Fleets")
    Else
        'Set up the map
FleetSetup - 2

With Players(1)
    For i = 1 To CInt(UBound(.Ships))
        If .Ships(i).Ship_Position > 0 Then
            Set MapScreen.ShipSquare(i).Picture = .Ships(i).Ship_Icon
            MapScreen.ShipSquare(i).Visible = True
        End If
    Next i
End With
With Players(2)
    For i = 1 To CInt(UBound(.Ships))
        If .Ships(i).Ship_Position > 0 Then
            Set MapScreen.ShipSquare(10 + i).Picture = .Ships(i).Ship_Icon
            MapScreen.ShipSquare(10 + i).Visible = True
        End If
    Next i
End With

round_no = 1
MapScreen.Phase_No.Text = round_no
Active_Player_No = 1
Active_Ship_No = 1
MapScreen.HighlightSquare(1).Visible = True
Me.Hide
End If
End Sub

Private Sub Form_Load()
    For i = 1 To 6
        Buy_Button(i).Enabled = False
    Next i
    P11_Money_Combo.Text = "500"
    P12_Money_Combo.Text = "500"
End Sub
Private Sub Fire_Button_Click(Index As Integer)
    Dim highlight_counter As Integer 'Index for the current highlight to place over a square 
    Dim i As Integer 'For loop indexing 
    Dim target_player_no As Integer 'This is the player being fired UPON 
    Dim wpn_range 'Distance between attacker and each enemy ship 
    Dim wpn_max_range 'Farthest the current weapon can fire 
    
    highlight_counter = 2 'The first highlight square is used for the window ship 
    target_player_no = 3 - Window_Player_No 'opposite player from the one firing 
    Window_Wpn_No = Index 
    
    'Determine the maximum range of the weapon being fired 
    Select Case Players(Window_Player_No).Ships(Window_Ship_No).Weapons(Index).Wpn_Type
        Case 1:
            wpn_max_range = 5
        Case 2:
            wpn_max_range = 7
        Case 3:
            wpn_max_range = 5
        Case 4:
            wpn_max_range = 4
        Case 5:
            wpn_max_range = 3
    End Select
    
    For i = 1 To 10 'Loop through each of opponent's ships 
        wpn_range = Dist(Players(Window_Player_No).Ships(Window_Ship_No).Ship_Position, _
                            Players(target_player_no).Ships(i).Ship_Position)
        
        For j = 1 To Len(Players(Window_Player_No).Ships(Window_Ship_No).Weapons(Index).Wpn_Dir)
            Dim temp As String
            Dim temp2 As String
            temp = Mid(Players(Window_Player_No).Ships(Window_Ship_No).Weapons(Index).Wpn_Dir, j, 1)
            temp2 = Arc_No(Players(Window_Player_No).Ships(Window_Ship_No), Players(target_player_no).Ships(i).Ship_Position, 
                            Mid(Players(Window_Player_No).Ships(Window_Ship_No).Weapons(Index).Wpn_Dir, j, 1)) <> 0 Then
                'If this ship exists...
                If Players(target_player_no).Ships(i).Type <> "" Then 
                    'And if it is within range 
                    If Dist(Players(Window_Player_No).Ships(Window_Ship_No).Ship_Position, _
                            Players(target_player_no).Ships(i).Ship_Position) <= wpn_max_range Then 
                        'Aaaand if it is within the current weapon's arc of firing 
                        If InStr(Arc_No(Players(Window_Player_No).Ships(Window_Ship_No), _
                                        Players(target_player_no).Ships(i).Ship_Position), 
                                Mid(Players(Window_Player_No).Ships(Window_Ship_No).Weapons(Index).Wpn_Dir, j, 1)) <> 0 Then 
                            'Put a highlight hex there to mark as a valid target 
                            MapScreen.HighlightSquare(highlight_counter).Left = _
                            MapScreen.HighlightSquare(highlight_counter).Top = _
                            MapScreen.HighlightSquare(highlight_counter).Visible = True 
                            MapScreen.HighlightSquare(highlight_counter).ZOrder 
                            highlight_counter = highlight_counter + 1
                        End If
                    End If
                End If
            End If
        Next j
    Next i
End Sub

Private Sub Form_Load()
    For i = 1 To 4
        Wpn_Name(i).Caption = "(" & i & ") " 
        Select Case Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Wpn_Type
            Case 1:
                Wpn_Name(i).Caption = Wpn_Name(i).Caption & "RF Laser"
ShipDisplay - 2

Case 2:
    Wpn_Name(i).Caption = Wpn_Name(i).Caption & "Phaser"
Case 3:
    Wpn_Name(i).Caption = Wpn_Name(i).Caption & "Heavy Phaser"
Case 4:
    Wpn_Name(i).Caption = Wpn_Name(i).Caption & "Torpedo Tube"
Case 5:
    Wpn_Name(i).Caption = Wpn_Name(i).Caption & "Devastator Cannon"
End Select

Wpn_Status_Label(i).Caption = Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Status

If Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Wpn_Type > 0 Then
    Wpn_Name(i).Visible = True
    Wpn_Status_Label(i).Visible = True
    Fire_Button(i).Visible = True
End If

If MapScreen.Phase_No.Text = "Fire!" And
    (Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Status = "Charged" Or
     Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Status = "Charged x2" Or
     Players(Window_Player_No).Ships(Window_Ship_No).Weapons(i).Status = "Charged x1") Then
    Fire_Button(i).Enabled = True
Else
    Fire_Button(i).Enabled = False
End If

Next i

With Players(Window_Player_No).Ships(Window_Ship_No)
    Shield1_Bar.Value = (.Shields(1).Current / .Shields(1).Max) * 100
    Shield2_Bar.Value = (.Shields(2).Current / .Shields(2).Max) * 100
    Shield3_Bar.Value = (.Shields(3).Current / .Shields(3).Max) * 100
    Shield5_Bar.Value = (.Shields(5).Current / .Shields(5).Max) * 100
    Shield6_Bar.Value = (.Shields(6).Current / .Shields(6).Max) * 100
    Hull_Bar.Value = (.Hull / .Hull_Max) * 100
End With


End Sub
VERSION 5.00

Object = "{(6B7E6392-850A-101B-AFC0-4210102A8DA7)#1.1#0}"; "COMCTL32.OCX"

Begin VB.Form MapScreen
  Caption = "Galaxy Map"
  ClientHeight = 7695
  ClientLeft = 60
  ClientTop = 630
  ClientWidth = 9930
  LinkTopic = "Form1"
  ScaleHeight = 513
  ScaleMode = 3 "Pixel"
  ScaleWidth = 662
  WindowState = 2 'Maximized

Begin VB.PictureBox Picture1
  Height = 495
  Index = 100
  Left = 1800
  ScaleHeight = 435
  ScaleWidth = 435
  TabIndex = 5
  Top = 5880
  Width = 495
End

Begin VB.PictureBox Picture1
  Height = 495
  Index = 0
  Left = 1920
  ScaleHeight = 435
  ScaleWidth = 435
  TabIndex = 4
  Top = 6960
  Width = 495
End

Begin VB.Frame Frame1
  Caption = "Frame1"
  Height = 5415
  Left = 360
  TabIndex = 0
  Top = 240
  Width = 2295

Begin VB.CommandButton Command3
  Height = 375
  Left = 1560
  MaskColor = &H80000005&
  Picture = "MapScreen.frx":0000
  Style = 1 'Graphical
  TabIndex = 3
  Top = 480
  UseMaskColor = -1 'True
  Width = 375
End

Begin VB.CommandButton Command2
  Height = 375
  Left = 960
  MaskColor = &H00FFFFFF&
  Picture = "MapScreen.frx":10C0
  Style = 1 'Graphical
TabIndex = 2
Top = 480
UseMaskColor = -1 'True
Width = 375
End
Begin VB.CommandButton Command1
Height = 375
Left = 360
Picture = "MapScreen.frx":186E
Style = 1 'Graphical
TabIndex = 1
Top = 480
Width = 375
End
End
Begin VB.Image MapSquare
Height = 375
Index = 37
Left = 3750
Picture = "MapScreen.frx":1B78
Top = 6750
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 19
Left = 3375
Picture = "MapScreen.frx":2326
Top = 6555
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 18
Left = 3000
Picture = "MapScreen.frx":2AD4
Top = 375
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 17
Left = 3000
Picture = "MapScreen.frx":3282
Top = 750
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 16
Left = 3000
Picture = "MapScreen.frx":3A30
Top = 1125
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 15
Left = 3000
Picture = "MapScreen.frx":41DE
Top = 1500
Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 14
  Left = 3000
  Picture = "MapScreen.frx":498C
  Top = 1875
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 13
  Left = 0
  Picture = "MapScreen.frx":513A
  Top = 2760
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 0
  Left = 3000
  Picture = "MapScreen.frx":58E8
  Top = 2250
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 12
  Left = 3000
  Picture = "MapScreen.frx":6096
  Top = 2625
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 11
  Left = 3000
  Picture = "MapScreen.frx":6844
  Top = 3375
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 10
  Left = 3000
  Picture = "MapScreen.frx":6FF2
  Top = 3750
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 9
  Left = 3000
  Picture = "MapScreen.frx":7230
  Top = 4125
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 8
  Left = 3000
  Picture = "MapScreen.frx":76C8
  Top = 4475
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 7
  Left = 3000
  Picture = "MapScreen.frx":7B14
  Top = 4825
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 6
  Left = 3000
  Picture = "MapScreen.frx":7F0C
  Top = 5175
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 5
  Left = 3000
  Picture = "MapScreen.frx":82F0
  Top = 5525
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 4
  Left = 3000
  Picture = "MapScreen.frx":8738
  Top = 5875
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 3
  Left = 3000
  Picture = "MapScreen.frx":8C94
  Top = 6225
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 2
  Left = 3000
  Picture = "MapScreen.frx":916C
  Top = 6575
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 1
  Left = 3000
  Picture = "MapScreen.frx":9620
  Top = 6925
  Width = 375
End
Begin VB.Image MapSquare
  Height = 375
  Index = 0
  Left = 3000
  Picture = "MapScreen.frx":9AD8
  Top = 7275
  Width = 375
End
Left    =  3000
Picture =  "MapScreen.frx":77A0
Top     =  3000
Width   =  375
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  8
    Left     =  3000
    Picture  =  "MapScreen.frx":7F4E
    Top      =  4125
    Width    =  375
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  7
    Left     =  3000
    Picture  =  "MapScreen.frx":86FC
    Top      =  4500
    Width    =  375
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  6
    Left     =  3000
    Picture  =  "MapScreen.frx":8EAA
    Top      =  4875
    Width    =  375
End
Begin ComctlLib.ImageList ImageList1
    Left   =  1200
    Top    =  6360
    _ExtentX =  1005
    _ExtentY =  1005
    BackColor = -2147483643
    MaskColor = 16777215
    _Version =  327680
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  5
    Left     =  3000
    Picture  =  "MapScreen.frx":9658
    Top      =  5250
    Width    =  375
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  30
    Left     =  9000
    Picture  =  "MapScreen.frx":9E06
    Top      =  1560
    Width    =  375
End
Begin VB.Image MapSquare
    Height   =  375
    Index    =  29
End
Left = 8640
Picture = "MapScreen.frx":A5B4
Top = 1440
Width = 375

End
Begin VB.Image MapSquare
  Height = 375
  Index = 97
  Left = 9360
  Picture = "MapScreen.frx":AD62
  Top = 1440
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 27
  Left = 8640
  Picture = "MapScreen.frx":B510
  Top = 1080
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 26
  Left = 8640
  Picture = "MapScreen.frx":BCBE
  Top = 720
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 25
  Left = 8640
  Picture = "MapScreen.frx":C46C
  Top = 360
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 24
  Left = 9000
  Picture = "MapScreen.frx":CC1A
  Top = 1200
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 98
  Left = 9360
  Picture = "MapScreen.frx":D3C8
  Top = 1080
  Width = 375
End

Begin VB.Image MapSquare
  Height = 375
  Index = 22
  Left = 9000
Picture = "MapScreen.frx":DB76
Top = 840
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 21
Left = 9000
Picture = "MapScreen.frx":E324
Top = 480
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 99
Left = 9360
Picture = "MapScreen.frx":EAD2
Top = 720
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 100
Left = 9360
Picture = "MapScreen.frx":F280
Top = 360
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 4
Left = 3000
Picture = "MapScreen.frx":FA2E
Top = 5625
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 3
Left = 3000
Picture = "MapScreen.frx":101DC
Top = 6000
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 2
Left = 3000
Picture = "MapScreen.frx":1098A
Top = 6375
Width = 375
End
Begin VB.Image MapSquare
Height = 375
Index = 1
Left = 3000
Picture = "MapScreen.frx":11138
Private Sub Form_Load()
    'Image1(0).Picture = "C:\windows\desktop\space.bmp"
    Dim Player1 As Fleet
    Dim Player2 As Fleet
    'Test scenario - set up some ships
    With Player1
        .Ships(1).Hull = 10
        .Ships(1).Shield1 = 15
        .Ships(1).Shield2 = 12
        .Ships(1).Shield3 = 12
        .Ships(1).Shield4 = 12
        .Ships(1).Shield5 = 12
        .Ships(1).Shield6 = 12
        .Ships(1).Wpn1Str = 3
        .Ships(1).Wpn1Dir = "123456"
        .Ships(1).Wpn2Str = 2
        .Ships(1).Wpn2Dir = "126"
        .Ships(1).Wpn3Str = 2
        .Ships(1).Wpn3Dir = "345"
    End With
    With Player2
        .Ships(1).Hull = 7
        .Ships(1).Shield1 = 9
        .Ships(1).Shield2 = 9
        .Ships(1).Shield3 = 9
        .Ships(1).Shield4 = 9
        .Ships(1).Shield5 = 9
        .Ships(1).Shield6 = 9
        .Ships(1).Wpn1Str = 3
        .Ships(1).Wpn1Dir = "1"
        .Ships(1).Wpn2Str = 1
        .Ships(1).Wpn2Dir = "12"
        .Ships(1).Wpn3Str = 1
        .Ships(1).Wpn3Dir = "16"
        .Ships(2).Hull = 7
        .Ships(2).Shield1 = 9
        .Ships(2).Shield2 = 9
        .Ships(2).Shield3 = 9
        .Ships(2).Shield4 = 9
        .Ships(2).Shield5 = 9
        .Ships(2).Shield6 = 9
        .Ships(2).Wpn1Str = 3
        .Ships(2).Wpn1Dir = "1"
        .Ships(2).Wpn2Str = 1
        .Ships(2).Wpn2Dir = "12"
    End With
End Sub
.Ships(2).Wpn3Str = 1
.Ships(2).Wpn3Dir = "16"

End With
End Sub

Private Sub Image1_Click(Index As Integer)

End Sub

Public Function CreateShip(ship_type As Integer)
    Select Case ship_type
    Case 1

End Function

Private Sub MapSquare_DblClick(Index As Integer)
    Dim X As ListImage
    Set X = ImageList1.ListImages.
            Add(, , LoadPicture("c:\windows\desktop\highlight.bmp"))
    Set X = ImageList1.ListImages.
            Add(, , LoadPicture("c:\windows\desktop\planet1.bmp"))
    ShipDisplay.Show
    'Set MapSquare(Index).Picture = ImageList1.Overlay(2, 1)
    'Set MapSquare(Index).Picture = ImageList1.Overlay(1, 2)
    Set MapSquare(Index).Picture = LoadPicture("C:\windows\desktop\overlay.bmp")

End Sub