

Motion Studios

Vasco da Gama

User Manual version 1

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1 Foreword

Dear Customer,

Thank you for choosing *Vasco da Gama* software.

Vasco da Gama offers you a range of new functions that you can use on your PC to enhance your video productions.

This user manual will introduce you to the extensive capabilities of the software and give you practical tips on how to use it effectively. The manual is divided into the following main sections: “Introduction and installation”, “Vasco da Gama in detail” and “tutorial”. At the end of the manual, you will also find a small glossary in which technical terms are explained. So if you come across a term in the text that you do not recognise, you can look it up in the glossary. You can also look up terms on the Internet, e.g. in the free English language encyclopaedia at <http://en.wikipedia.org>.

At this point, we would like to point out some conventions used in this manual.

This symbol is used to indicate a tip. In a section marked with this symbol, you will find useful information and suggestions related to the program.



In contrast, this symbol is used to highlight important sections. Please make sure to observe the information in these boxes at all times.



We hope you enjoy using your new *Vasco da Gama* software.

Your MotionStudios team

2 Introduction and Installation

2.1 What exactly is Vasco da Gama?

Vasco da Gama is software that offers new functions in the area of PC video editing.

Vasco da Gama is mainly used to create attractive graphical representations of travel routes on world, country and city maps.

To enable you to do this, *Vasco da Gama* offers you multiple video sequence design options. With the videos you create, you can enhance your travel and your holiday videos in a way that you've only ever seen before in TV productions.

The *Vasco da Gama* software package contains various different types of maps and a variety of 3D objects, for example cars, aeroplanes, ships and trains.

In addition to these extensive features, *Vasco da Gama* offers a design that is sophisticated and simple to use, allowing you to give free rein to your creativity. We have designed the software so that a project needs no preparatory work at all. You can just jump in and get started immediately – all settings can be changed at any time. You will also notice that any changes to settings are usually immediately visible. This should encourage you to “play” with the settings and see what happens.

2.2 Installation of the software to your Computer

Included in your *Vasco da Gama* software package is this manual, a registration card with serial number and a CD. Before you can use the software, it must be set up on your computer.

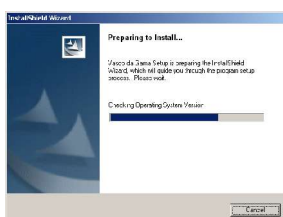
Please note that the minimum requirements to use *Vasco da Gama* are a PC equipped with an 800 MHz processor, 256 MB main memory (RAM), a 3D capable graphics card and Windows 98SE/2000/XP operating system.

Your desktop should be running at a resolution of 1024x768 pixels and true-colour colour depth (24/32bit colour depth).



Vasco da Gama also requires DirectX 9.0. If necessary, please install this first. You will find a recent version of DirectX on the CD.

To install, please insert the *Vasco da Gama* CD into your CD or DVD drive. The installation wizard will soon appear. If the autoplay function is not activated on your PC or if for some other reason the installation wizard does not appear, double click on the My Computer symbol on your desktop and then on the symbol for your CD-ROM drive where the *Vasco da Gama* CD is inserted. Double click on the file setup.exe in the list of files to start the installation wizard.



The installation wizard appears and starts preparing the installation. Please be patient as this can take a few seconds.

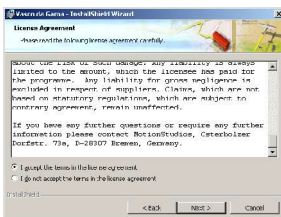
2.2 Installation of the software to your Computer



When the wizard dialog window appears, click on “Next”.



The wizard informs you which software package is to be installed. Click “Next” on this page too.



The licence agreement appears on the screen. In order to be able to use *Vasco da Gama*, you must agree to the conditions in the licence agreement. To continue the installation, click on “Yes” and then on “Next”.

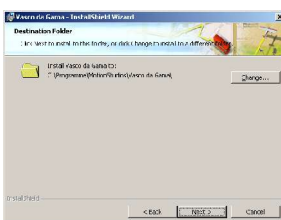
If you do not click on “Yes”, the installation will be cancelled. You will then not be able to use the *Vasco da Gama* software.



In the next window, enter your name and/or company name. Depending on how you have set up your system, you will need to specify whether you are installing *Vasco da Gama* for all users of your PC or just for yourself.

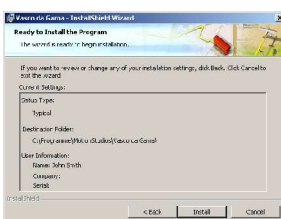
Now enter the serial number from the back of the booklet into the space provided and click on “Next”.

Make sure you enter the serial number 100% correctly or otherwise *Vasco da Gama* will not be activated!



The next window allows you to specify the target directory for the *Vasco da Gama* files. When doing this, you can use the default path or choose another path by clicking “Browse”.

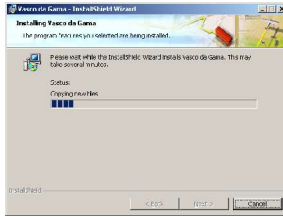
Click “Next” when you have made the required adjustments.



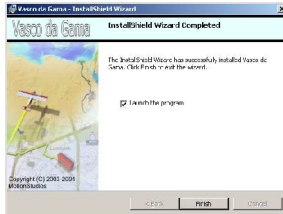
On this window, the installation wizard again displays all the settings selected. If you want to change a setting, you can skip back to the respective page using the “Back” button.

To start the installation process, please click on “Install”.

MotionStudios : Vasco da Gama



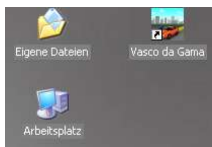
The installation process will now start. This can take some time and depends on the speed of your CD/DVD drive.



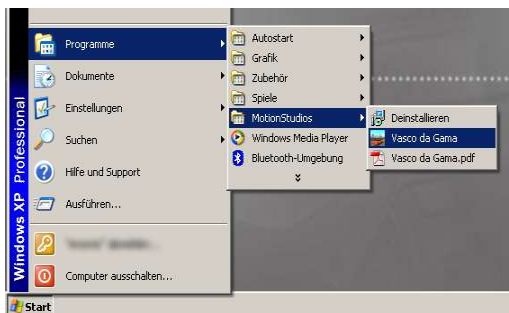
After successful installation, the installation wizard will inform you that the installation is complete. If you tick the “start program” option, *Vasco da Gama* will be launched on exiting the wizard. Click on “Finish”.

Vasco da Gama is now installed on your computer.

2.3 Starting the software



Vasco da Gama can be started using the program symbol you can find on your desktop or in the start menu.



Double click on the *Vasco da Gama* icon on your desktop or using the start menu, click on „Start → Programs → MotionStudios → Vasco da Gama“.

Vasco da Gama loads and opens its main window.

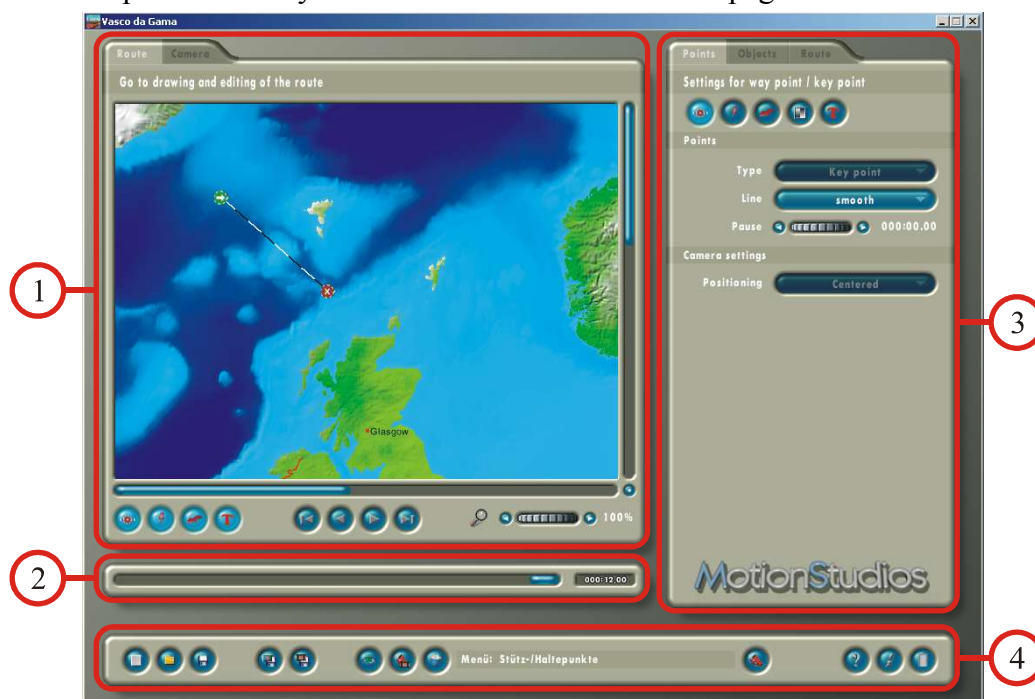
3 Vasco da Gama in detail

Creating a route in *Vasco da Gama* usually begins with choosing a suitable map. You then specify points to show the stopovers on your tour. You can add 3D objects e.g. houses, castles or sports stadiums to these stopover points. These objects are called stopover objects. It is also possible to add text objects to label these stopovers. You can also select 3D objects that symbolise the means of transport used for the different sections of the route. These objects are called header objects as they mark the most advanced point of the route during the video animation. Throughout the whole tour, you can use the *Vasco da Gama* camera to fly over the map and zoom in on different points. The completed video can be output as a whole or as individual video sequences and then loaded into a video-editing program of your choice.

The following sections explain all the application display controls in detail. In chapter 4 from page 36 of the tutorial, we use examples to illustrate the use of the functions described in the following section.

3.1 The main display screen

When you start *Vasco da Gama*, you will see the following screen. The window is divided into 4 main areas. Each area contains numerous user controls. Some areas have tabs at the top with which you can switch between different pages.



1. The map area shows the map and the route. You can change the route here using the mouse.
2. The timeline is used to control the chronological progress of the video.
3. The main menu offers settings and options for the stopovers, the 3D objects displayed and the route.
4. The project bar contains buttons for loading and saving projects, for project settings

and project overview and a button to close *Vasco da Gama*.

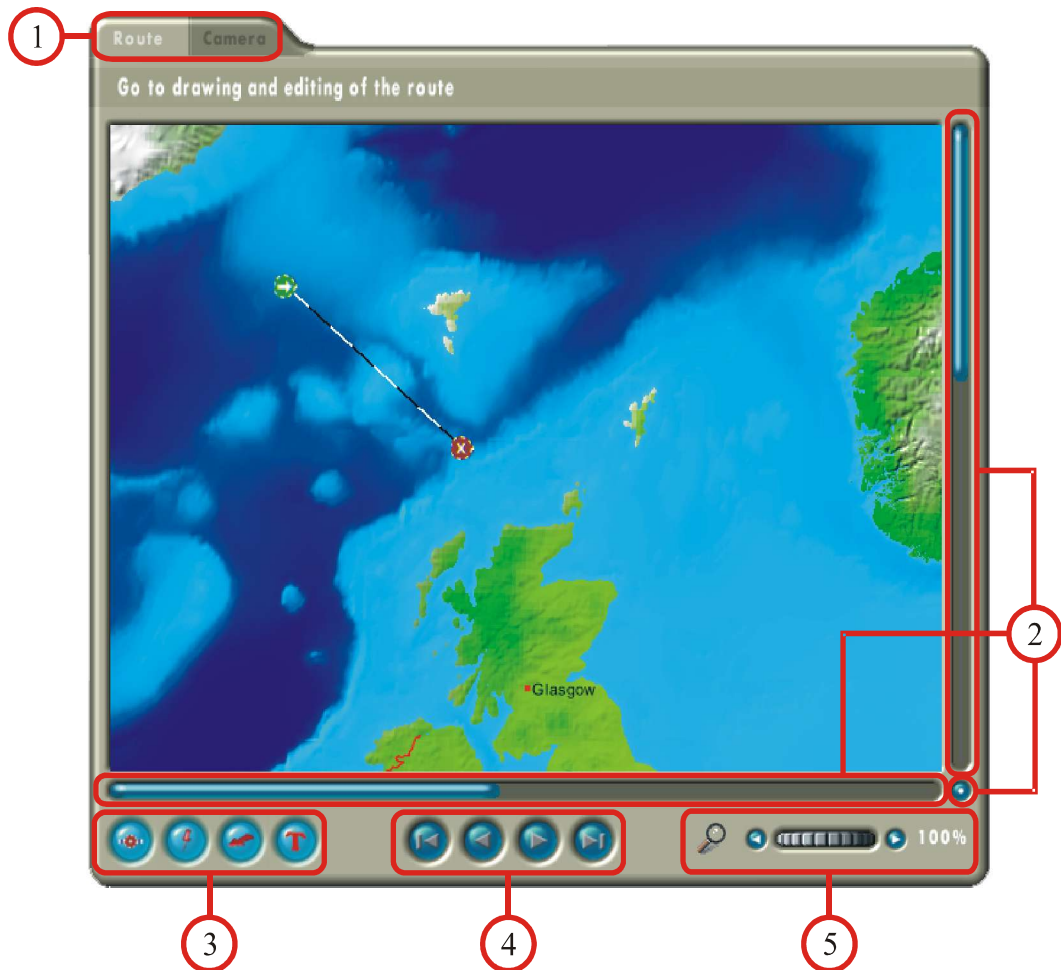


If you move the mouse pointer over a button, a brief description will be shown in the project bar.

The individual areas of the main display screen will be explained in more detail in the following sections.





3.1.1 The map area

In this area, you can configure the progress of the route. You will see a large map with some symbols on it. There are buttons below the map that can be used to configure the route and how objects are displayed and to navigate the map or within the route.





But the most important feature in this area is the section with the graphical representation of the map that is currently loaded. You can see the route on the map. It consists of stopover markers connected by a dashed line. Using the mouse, you can modify this route by moving, inserting or removing points. *Vasco da Gama* also provides you with a range of keyboard shortcuts that you can use in combination with the mouse. You will find these listed in a table in chapter 8 on page 49.

When you start the program for the first time, you will see a route with a start and an end point. The marker points have different meanings depending on their symbols:

Name	Symbol	Meaning
Starting point		This marks the beginning of the route.
Stopover point		This type of point can be used to indicate any point at which you made a stop. <i>Vasco da Gama</i> can then automatically cut the resulting video at this point. You will find the settings necessary for this in section 3.1.3.1 on page 9.
Supporting point		Supporting points allow you to control the progress of the route.
End point		This type of point specifies the end of the route.

Weiterhin unterscheiden sich die Punkte in ihrer Farbe. Die Farbgebung kennzeichnet den Modus eines Punktes:

Colour	Meaning
	Green signals that the point is active. For example, you can activate a point by selecting it with the mouse. If a point is active, its settings (e.g. whether it displays a 3D stopover object) are always applied. Only one point can be active at any one time. When a point is active, you can move it. To do this, click on the point using the left mouse button and move the mouse while keeping the left mouse button pressed down. Right click to stop moving the point.
	If a point is red, this means it is not active and is therefore not being edited at the current time.

To add new points to the route, just left click between two existing points on the line representing the route. A new supporting point will then be added and activated at the position clicked. You can now move this to the required position using the mouse or you can convert it into a stopover point. (see section 3.1.3.1 on page 9).

To remove a point, first activate it so that it turns green. Then right click on the point. Start points and end points cannot be deleted.

You can add, delete or move points at any time during your work on the project. It is therefore up to you whether you want to create all the points first and set them up or whether you want to take each point at a time.

We now come to the user controls in the map area.

1. Switching between the route editor and the camera editor:

You can switch between the two editors using the tabs. In the route editor, you can specify the main stopovers on your tour. These will be visible as a dashed line with stopover markers. The camera view shows you the route as you will see it in the finished video. You can also define how the camera travels and zooms.





2. Adjusting the visible part of the map:

You can change which part of the map is visible using the vertical and horizontal bars. Alternatively you can change the section of the map displayed by clicking on the round button at the bottom right and moving the mouse while holding the mouse button down. The section of the map displayed then changes according to the

movement of the mouse.


In camera view, you can only move around the map if the option “manual camera control” is activated (see chapter 3.1.3.3, page 23) and the camera setting for the current point is on “manual positioning” (see chapter 3.1.3.1, page 9).

3. Display options for objects on the maps:


With these switches, you can activate or deactivate the display of objects on the map. When the objects are active, the switches are marked with a red symbol and light up. Otherwise the symbol is black and the buttons are not lit up. From left to right, the objects controlled by the switches are:  the route,  the objects at stopover points,  the objects at the head of the route and  text label objects.

4. Browsing through marker points:

At a minimum, a route consists of a start point and an end point. Between these, there can be supporting points and stopover points. All these points are connected by the dashed line representing the route. To edit a point, you must select it. You can use these buttons to do this.

In camera view, a camera  is displayed to the left of these buttons if the marker point is a supporting point for the camera. This is preset for start points, end points and stopover points but not for supporting points. Section 3.1.3.3 on page 23 describes how to change this setting.

5. Enlarging the map area:

The two buttons and the wheel beside the magnifying glass are used to zoom in and out on the visible map area. With these buttons, you can shrink or enlarge the map area in small steps. To use the wheel, click on it and move the mouse to the left to shrink and to the right to enlarge. Left click to apply the setting and right click to restore the original setting. The current enlargement is shown on the left hand side. In camera mode, the enlargement can only be set up for marker points to the left of the scan buttons that are marked with a camera .

3.1.2 The timeline

Your work in *Vasco da Gama* produces a video or a series of video sequences showing the animated travel route. You can go to specific points in time using the timeline.

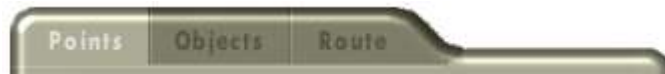


The blue bar in the timeline tells you the time progressed at the point at which you are currently working. To the right of the timeline, the time is displayed again in the form 'Minuten: Sekunden. Videobilder'.

To go back and forward in time, left click on the blue bar and move the mouse to the right or left while keeping the mouse button pressed down. When you do this in camera view, you will immediately see the camera moving on the map.

3.1.3 The main menu

This section contains all the functions used to edit the waypoints, the 3D objects and the route. You can switch between the individual areas using the tabs at the top.



There is a submenu bar under each tab. Each submenu is made up of sections with different titles.

Simply browse through all the tabs and submenus belonging to them and take a look at the settings. This will help you get to know your way around the software for later.



3.1.3.1 Points

This menu provides you with a range of design options for the stopovers on the route. They range from adjusting the appearance of the header object to selecting the stopover objects and adding text objects.

Only the first menu point is available for supporting points.



Supporting points and stopover points

Here you will find all configuration options for the marker point currently selected. It is marked in green on the map.



- **Points**

- **Type:**

If you activate a stopover or a supporting point, you can use this setting to change its type. Reminder: You use stopover points for the stopovers on your route. Supporting points are used to form the course of the route.

- **Line:**

You can use these options to change the shape of the curve. A smooth curved line is set as default. If you change to “Angular”, a straight line is drawn to and away from the object. If “Angular” is selected for two neighbouring points, these points will be connected by a straight line. You can see the

difference in the following two pictures:



smooth line



angular line

- **Stop time:**

Whenever the route reaches a stopover point, the header object pauses for a moment before the route is continued further. The pause duration is determined by the stop time. If the stop time is set to zero, the movement continues immediately.

The stop time has another function. Instead of one long video, Vasco da Gama can produce several short sequences. Whenever a stop time is longer than 2 frames, then *Vasco da Gama* on request can place a cut at this point in the middle of the stop time. This makes it easier to integrate into your video editing program. You can switch automatic cutting on and off in the project settings (see chapter 3.5, page 31).

- **Camera settings**

- **Positionierung:**

The camera positioning can only be changed if the option “manual cameral control” is activated. This is explained in chapter 3.1.3.3 on page 23. The simplest mode is “centred” as this ensures that the stopover point is in the middle of the picture. In contrast, “manual” allows you to freely position the camera using the controls in the map area (see chapter 3.1.1, page 6). The third option that can be selected is “Off”. If this is selected, the camera moves from the previous stopover point to the next without making a separate stop at the current point.

Objects at stopover points

You can add 3D objects to every stopover point. In this submenu, you will find options to individually design each stopover point.



- **Object selection for stopover point**
 - **Object:**
Vasco da Gama can display a global object (see section 3.1.3.2 on page 17), a special (local) object or no object at this stopover point. If you decide to use a local stopover object, you can select it using the following controls.
 - **Stopover object:**
This button allows you to select the object. The window allows you to browse through the available objects and see a preview. The object selection is described in chapter 3.2 on page 27.
 - **Size:**
You can use the wheel to adjust the size of the selected object from 10% to 100%.
- **Object positioning**
Objects are displayed relative to the respective stopover point. If you subsequently move a stopover point, the object belonging to it moves with it.
 - **Position:**
If “Global” is selected here, the positioning details from the global object

settings (see section 3.1.3.2, page 17) are applied. If these settings are not very suitable for a particular point, for example because the object is covering a detail on the map, you can change this option to “local” and then choose a different position with the following controls.

- **Horizontal:**
Moves the object to the left or the right relative to the stopover point.
- **Vertical:**
Moves the object up or down.
- **Object view**
 - **View:**
If “Global” is selected here, the view details from the global object settings (see section 3.1.3.2, page 17) are applied. If these settings are not very suitable for a particular point, they can also be adjusted by switching to “local”.
 - **X angle :** ↺
Rotates the object around the horizontal axis by the angle specified.
 - **Y angle:** ↻
Rotates the object around the vertical axis by the angle specified.
 - **Z angle:** ↻
Rotates the object around the z axes (depth) by the angle specified.

Header objects

Vasco da Gama can also display a 3D object at the beginning of the travel route. This can symbolise the means of transport you use or the way you travel. You have the possibility to change this object at every stopover point (e.g. changing from a car to ship). If you do not change it, the previous object will continue to be used.



- **Object selection for the header object**

- **Display:**

At every stopover point, you can select a new 3D object for the rest of the route. To choose a new object, select “Change” here. If you do not want to change your means of transport, choose “Current”. Finally, you can also switch off the header object by selected the “Off” option.

- **Select:**

This button allows you to select an object. The window allows you to browse through the available objects and see a preview. The object selection is described in chapter 3.2 on page 27.

- **Size:**

You can use the wheel to adjust the size of the selected object from 10% to 100%.

- **Automatic direction:**




Vasco da Gama can automatically align the header object according to the direction of the route. For a rounded route (see section 3.1.3.1, page 9), the

header object will be turned slightly so that it still follows the direction of the route.

- **Object positioning**

- **Horizontal:**
Moves the object to the left or the right relative to the top of the route.
- **Vertical:**
Moves the object up or down.

- **Object view**

- **X angle:** 
Rotates the object around the horizontal axis by the angle specified.
- **Y angle:** 
Rotates the object around the vertical axis by the angle specified.
- **Z angle:** 
Rotates the object around the z axes (depth) by the angle specified.

Fading header objects in and out

Whenever the route arrives at a stopover point, the header object can be faded out. When the stopover point is left behind, the same header object or a new one can be faded in. This makes it easier to see a 3D object displayed at a stopover point.



- **Transition handling at stopover points**

- **Fade-in effect:**
Vasco da Gama provides you a choice of several fade effects. If you do not want to use any effect, select “Off”.
The “smooth fade” makes the object smoothly fade into view. At first the object is completely transparent but then it gradually loses its glassy character until it is completely visible.
In “light up” mode, the object briefly appears very bright and then fades back to its original colour.
The “scale” effect enlarges the object up from a tiny point up to its original size.
If you choose “Global”, the general fade effect is used. You will find these settings in section 3.1.3.2 on page 18. For the “Global” setting, not only the fade effect but also the time from these settings is applied.
- **Fade-in time:**
This option allows you to control the duration of the fade-in effect selected.

The time details are displayed as 'minutes: seconds.video frames'. You can select values from 1 frame up to 12 seconds.

However if the time is too short, you will hardly see the effect. We recommend a minimum fade time of one second.



- **Fade-out effect:**
Here you can select the desired fade-out effect. These are the same as the fade-in effects but have the opposite effect.
- **Fade-out time:**
This option allows you to control the duration of the fade-out effect selected. This function is also the same as that for the fade-in time.

Text at stopover points

Every stopover point can be labelled with a text object. You can use these to identify stopovers that have not yet been assigned a name in the map.

The design settings for text objects, such as font and size and borders and shadow are explained in chapter 3.1.3.3 on page 22.



- **Text details for stopover point**
 - **Show text:**
Select this if you would like to add a text object to the current stopover point.
 - **Text:**
You can enter the text to be displayed into this box using the keyboard. The text can only be one line long.

Try to use the shortest description possible, so that not too much of the map and the route are covered up.



- **Position:**
The text is displayed relative to the stopover point. If you move the stopover point, the text moves with it. Using this option, you can choose whereabouts the text will be placed.
- **Abstand:**
The higher you set the distance, the farther away the text object will be placed from its stopover point.

On the right hand side, you can see an example of a stopover point with a text object. The text 'swimming' was inserted with position 'top left' and a distance of '6 %'. 'Arial/8' was chosen for the font. The shadow was placed at a distance of '5' at an angle of '135°' and a level '15' softening was applied to it.



3.1.3.2 Objects

In this menu you will find a variety of settings with which you can change the display of header and stopover objects. This includes fade and lighting settings.



Global stopover object

Defining various stopover objects can take a lot of time. Therefore *Vasco da Gama* gives you the possibility to select a global object for all stopover points. You can replace this object with another for specific stopover points. You can read up on how this is done in section 3.1.3.1 on page 11.



- **Object selection for stopover point**
 - **Display:**
Select “On” here if you would like to use a global stopover object.
 - **Stopover object:**
This button allows you to select an object. The window allows you to browse through the available objects and see a preview. The object selection is described in chapter 3.2 on page 27.
 - **Size:**
You can use the wheel to adjust the size of the selected object from 10% to 100%.
- **Object positioning**
 - **Horizontal:**
Moves the object to the left or the right relative to the top of the route.

- **Vertical:**
Moves the object up or down.
- **Object view**
 - **X angle:** ↺
Rotates the object around the horizontal axis by the angle specified.
 - **Y angle:** ↻
Rotates the object around the vertical axis by the angle specified.
 - **Z angle:** ↻
Rotates the object around the z axes (depth) by the angle specified.

Global fade setting

The fade-in and fade-out properties for the header object can also be globally set for all stopover points.



- **Transition handling at stopover points**
 - **Fade-in effect:**
Vasco da Gama provides you a choice of several fade effects. If you do not want to use any effect, select “Off”.
The “smooth fade” makes the object fade into view smoothly. At first the object is completely transparent but then it gradually loses its glassy character until it is completely visible.
In “light up” mode, the object briefly appears very bright and then fades back to its original colour.
The “scale” effect enlarges the object up from a tiny point up to its original size.
 - **Fade-in time:**
Here you can control the duration of the fade-in effect selected. The time details are displayed as 'minutes: seconds.video frames'. You can select values from 1 frame up to 12 seconds.
 - **Fade-out effect:**
Here you can select the desired fade-out effect. These are the same as the fade-in effects but have the opposite effect.
 - **Fade-out time:**
This option allows you to control the duration of the fade-out effect selected. This function is also the same as that for the fade-in time.

Object light settings

The 3D objects displayed are illuminated by a virtual light source. This contributes significantly to a realistic 3D representation. If you are only using 2D objects, you can switch off the light. The flat objects will then appear to have a more uniform colour. When the light source is activated, you can use this menu to set the direction and colour of the light.



- **Light settings**
 - **Use light:**
Choose whether a light source is to be used or not.
 - **Direction:**
You can use this menu selection to specify which way the light source is directed.
 - **Colour:**
This shows you the current colour of the light. The “select colour” button will bring you to the colour selection, which is displayed in a separate window. This is described in chapter 3.3 on page 29.

3.1.3.3 Route

This submenu contains settings for the route. Among other things, you can change how the line of the route is displayed, you can edit the appearance of text objects and the type of camera control and you can set the total time for the video.



Line settings

The progression of the route can be displayed by a coloured line in the video. This line can show the entire route but can also be animated during the video so that it shows the current position. In this menu you can make changes to how the line is displayed graphically.



- **Settings for the line progression**
 - **Progression:**

If “Progression” is set to “On”, a line is drawn from the departure point of the route. If you switch off the progression line, just a header object will be displayed during the route animation at the position the journey has reached.
 - **Colour:**

This colour identifies the current distance travelled. Using the “select colour” button, you get to the colour selection, which is described in chapter 3.3 on page 29. If you enter very low values for the transparency here, the line for the route will appear transparent.
- **Settings for the course of the line**
 - **Course:**

If this option is set to “On”, the complete course of the route is shown as a line. If the progression line is also switched on, this is drawn over it during the route animation.

- **Colour:**

This colour is used to draw the complete course of the route. Again, you can also use the “select colour” button to select a colour. And again, you can create a transparent line by selecting a low value for the transparency.



Both lines “Off”



Progression is “On”



Course is “On”



Both lines are “On”

- **Design settings for the line**

- **Style:**

Vasco da Gama offers you four different line styles, such as solid, dashed and dotted.

- **Width:**

You can use this to select the width of the coloured route line.

Text attributes

On this menu page, you will find settings for the design of the fonts for text objects, which you can add to stopover points (see chapter 3.1.3.1, page 15).



Design settings for text

- **Font:**
Vasco da Gama can use all the fonts installed on your system. Clicking on the “choose font / font size button brings you to a window that displays the fonts available on your system. This selection window behaves as in other Windows applications.
- **Font colour:**
The colour currently selected is shown here. You can use the “select colour” button to get to the colour selection, which is displayed in a separate window. This is described in chapter 3.3 on page 29.
- **Border settings**
 - **Border:**
A piece of text can be given a border of a different colour. This can improve the legibility.
You can switch the border off with the “Off” option. You can choose from three different levels of border thickness – “thin”, “medium” and “thick”
 - **Border colour:**
A border colour that is easily distinguishable from the font colour should be chosen. The current colour is displayed and again you can change the colour by clicking on the “select colour” button.

- **Shadow settings**

- **Shadow:**
Vasco da Gama can also add a shadow to the font. This makes the font look like it is floating lightly above the map.
- **Angle:**
You can use this option to choose the direction in which the shadow falls. This can be an angle between 0° and 360°.

If you are using a light source, you should make sure that the light direction and the shadow direction agree with each other.




- **Distance:**
You can use the “distance” control to set the distance between the shadow and the font. The higher the distance you choose, the higher the font seems to float above the map.
- **Softening:**
The shadow can be sharp or “blurred”. The higher the value for “set softening” you set, the more blurred the shadow will appear.
- **Shadow colour:**
You can select a colour for the shadow too.

Camera settings

Vasco da Gama tracks the course of the route with a virtual camera. You can adjust the camera control here.



- **Camera setting**

- **Camera control:**
Vasco da Gama offers you two selection options for the camera control: “automatic and manual”. It is recommended that you select automatic camera control for your first *Vasco da Gama* projects. In this mode, *Vasco da Gama* sets up the camera to follow the route. Then you can only select the enlargement for every point on your route (see 'Enlarging the map area' in chapter 3.1.1 on page 8).
- **Camera points:**
With this option, you can choose if just stopover points or if all points should be used as supporting points for the camera control. If only stopover points (these include start and end points) are to be used as camera supporting points, it will not be possible to edit the camera at route supporting points. The corresponding controls are then greyed out. In addition, a camera symbol  will only be displayed in the map area beside the buttons for scrolling

through the supporting points, if the current point on the route is a camera supporting point.

Time overview for the route

The time taken for the route can be specified on this page. The pause times at stopover points, the total fade times and the total time for the entire video are also displayed here.



Time	
Route:	000:12.00
Stop time:	000:00.05
Fading:	000:00.00
Total time:	000:12.05

- **Calculation of the time taken for the entire route**

- **Route:**
Enter the total time for the entire route here. *Vasco da Gama* distributes the time evenly over the whole route.
- **Stop time:**
As described in chapter 3.1.3.1 on page 9, you can set a stop time for stopover points. Here you can see the sum of the stop times for all stopover points.
- **Fading:**
The times for the fading in and fading out of header objects are also included in the time (see chapter 3.1.3.1, page 14). The sum of these is displayed here.
- **Total time:**
The running time for the completed video is made up of the times described above.

3.1.4 The project bar

You will find project related functions on the left side of this bar and program related functions on the right.



1. New project:

After asking you for confirmation, the current project is cancelled. You will be brought to the project settings. These are described in chapter 3.5 on page 31. After leaving the settings window, the selected map and a new route with start and end point are displayed.

Loading a project:

Vasco da Gama automatically loads the last edited project on start-up. Therefore you can usually continue your work right from the place you left off in the previous session. If you are working on several projects at the same time, you can use this option to load the project you want into *Vasco da Gama*.

Saving the project:

When you save a project, all settings that you have made are stored in a file on a storage device in your computer (hard drive). Before closing *Vasco da Gama*, you should make sure to save the project so that you can continue at this point again later.

While you're working with *Vasco da Gama*, you should save your project from time to time. If your computer crashes, you can then at least continue working from the point at which you last saved the project.



2. Saving the map:

With this function, you can save the current view in the map window as a picture. You can use this function, for example, if you want to create a photo album of your tour and need pictures of the route for illustration.

Saving the project as a video:

When you are happy with the route created, you will want to integrate it into your travel video. To do this, you save the route animations as a video or video sequences. You can then load these into your video editing program.

When you click on the button, *Vasco da Gama* first asks you for the video name and a directory where it is to be stored.

If you chose 'Video for Windows' (VfW) as the video output format in the program settings (see chapter 3.6, page 33), you will now also be asked to choose the video coding. VfW asks you to choose the subprogram it will use to save the video data.

The number of available formats is dependent on your system installation.


Unfortunately not all codings are always functional.

This process can take a few minutes, depending on the video resolution and format, the length of the video and the processing power of your computer. You should also make sure that you have enough free space on your hard drive for the video.



3.  **Video preview:**

Clicking on this button opens a new window in which you can see a preview of the video. The controls in this window are described in chapter 3.4 on page 30.

 **Project settings:**

You can use this button to open the settings for the current project. These range from video parameters to selecting the map you would like to use for the route. You will find a more detailed description of this window in chapter 3.5 on page 31.

 **Resetting the project:**

This function is similar to creating a new project. However in contrast to a new project, it keeps the current map. So if a route is not going very well for you, you can use this function to start again from the beginning.

4. **Quick help:**

In this area, *Vasco da Gama* shows you a short description of the buttons at which the mouse pointer is pointing.

5.  **Program settings:**


This button opens a window with options for program settings (e.g. to set the graphics quality). These settings are independent of the projects you are working on. The individual options are explained in chapter 3.6 on page 33.

6.  **Opening Help:**

This button brings you to the *Vasco da Gama* Help. A separate window opens, which you can keep open while working. The document in the Help view corresponds as much as possible to this manual.

 **Display information on *Vasco da Gama*:**

This displays a window with information on the program. In addition to other information, you find the address for the *Vasco da Gama* website on the Internet and the email address to use for help with problems.

 **Closing *Vasco da Gama*:**

This closes your *Vasco da Gama* session. After clicking on this button, the program will ask you if you would like to save your project before closing, if you have not already done so.



If you do not save your project before closing, you will lose any changes made since the last save.

3.2 Object selection



In *Vasco da Gama*, you can access a variety of professional 3D objects with which to enhance stopover points and design header objects. In the selection window, you will see an animated 3D preview of the selected object and a selection list with small preview pictures. In chapter 9, from page 50 for your reference, you can find pictures of all the objects provided.



There are two buttons above the selection list on the right hand side. The top button, labelled “product”, is used to select from the object package. Many objects are already included in *Vasco da Gama*. More object packages can be bought separately. *Vasco da Gama* automatically detects if you have purchased and installed one or more such packages. If this is the case, the product button is activated and allows you to select from the package. Under the product button, you can pre-select the object type. Categorising the objects like this makes it easier for you to make your selection from the numerous objects. Every time you make a change in the product or type selection, the object list is updated.

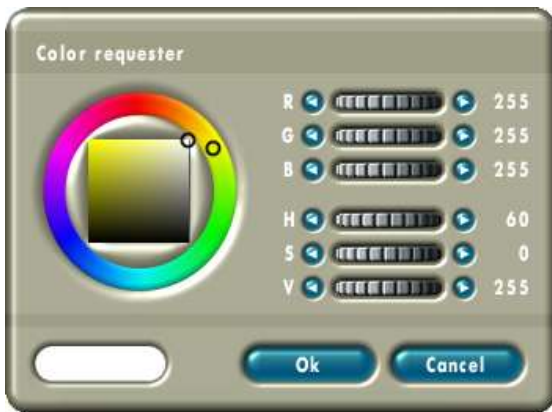
In the list on the right hand side, you will see small previews of the objects in the currently selected category. You can scroll through the list using the slider and the arrow buttons. The currently selected object is surrounded by a bright border and is shown on the left hand side in a large animated preview. The name of the object is displayed above the preview area. You can select an object in the list by left clicking it once. The new object is then displayed in the preview.

It is possible to change the colour of many objects. Depending on the object selected, additional controls will then be displayed below the preview.

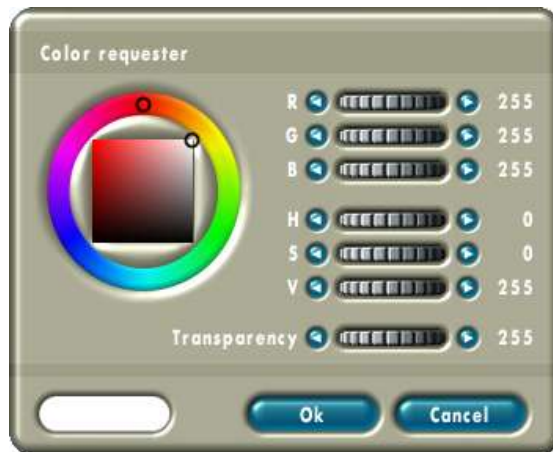
Control	Description
	<p>In the selection list, you will find several presets to choose from. These offer you various patterns with which the object can be decorated.</p>
	<p>In this case, you can also choose any colour you like. Depending on the object, this colour will be used for larger areas of the object or for decoration. Using the 'select colour' button, you get to the colour selection, which is described in chapter 3.3, on page 29.</p>

3.3 Colour selection

Colours are important at many stages in *Vasco da Gama*, whether you are designing the line representing the route or colouring objects. Every time you click “select colour”, you will get to one of these windows.

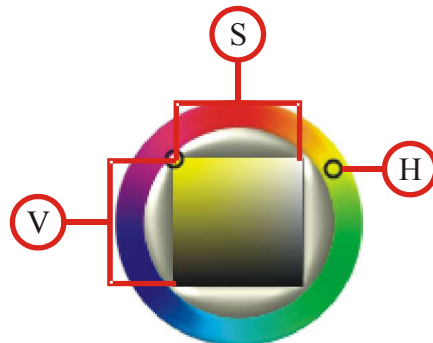


Without transparency



With transparency

You can see the colour wheel on the left side of both windows. All the colours are displayed on the outer circle. The small black circle marks the currently selected colour. The inner square can be used to choose the saturation and brightness of the colour. The current value is also marked by a small black circle. Both circles can be moved using the mouse. The current colour is always displayed at the bottom left.



There are two groups of sliders on the right hand side. One for the RGB colour model and one for the HSV colour model. In the RGB model, a colour is specified based on its red, green and blue components. Setting all 3 sliders to 0 results in black and setting all sliders to 255 results in white. If you select the colour using the colour wheel, you will see the sliders change according to your selection. Similarly, the two black circles in the colour wheel will also “move” when you move the wheels.

3.4 Video preview

While working on the travel route, it is helpful to take a look at a preview of the video from time to time. That is what this window is for.



The elapsed time is shown at the bottom of the window. When the video has come to an end, the window is automatically closed. You can also click the “cancel” button to cancel the display and leave the real-time preview.

If the preview video appears choppy, the processing power of your system is not sufficient. To compensate for this, you can slightly reduce the preview quality in the program settings (see chapter 3.6, page 33) .

Another reason for the preview being slightly choppy is the difference between the refresh rate of the video and that of the monitor or flat panel

3.5 Project settings

There is a range of basic settings for every project. These are usually specified only once at the beginning of the project.



The “video template” option provides you with several templates for “video settings”. If you choose a template here, the respective values are shown below this option. You can change these if required. If you have not chosen “Video for Windows” as the video output format in the program settings (see chapter 3.6, page 33), the settings for “width”, “height” and “frames per second” are deactivated.

- **Video preferences**

- **Width:**
The horizontal resolution of the video is shown here. Values from 360 to 800 points can be specified if the field is activated.
- **Height:**
Similarly, the vertical resolution of the video is shown here. Values from 288 to 600 points can be entered if the field is activated.
- **Frames per second (fps):**
The refresh rate is given in “frames per second”. The values you set here must be compatible with your video system. For example, a PAL system uses 50 frames per second.

- **Field order:**

With this option, you can change the way the video is displayed. Normal video frames are stored in “interlaced” mode. In interlaced mode, a frame is divided into two fields – one with all the even lines and one with all the odd lines. These fields are alternated so quickly during playback that the eye does not notice any difference.

If your travel video is to be subsequently played on a TV, please select “top field first” here. For a modern DVD production, the choice of the “non-interlaced (progressive scan)” option is recommended.

- **Pixel aspect ratio:**

You can choose between different aspect ratios using this option. Standard TV sets use the aspect ratio 4:3. New wide screen devices use the 16:9 format as used in the cinema.



If you create a video in 16:9 wide screen format and view it on a modern TV set (4:3), the video will be displayed with black stripes at the top and bottom borders of the screen. On old TV sets, it is possible that the video picture will be distorted (stretched in height).

- **Map selection**

Here you will see the path to the currently selected map. To the right of the path is the file selection button, which will open a window where you can select the file. In this window, you can choose a different map for this project. You can load your own maps in addition to those included in *Vasco da Gama*. Many holiday brochures print maps that you can scan into your computer using a scanner.



The maps must be in one of the following image formats. The following formats are supported: bmp (windows bitmap), png (portable network graphics), targa or tga (truevision), jpeg (joint photographic expert group) and tiff (tagged image file format). The maximum map size may not exceed 8000 x 8000 pixels. But the resolution of the map should at least equal the video resolution. Many scanning programs display the pixel resolution and the picture file size expected.

- **Automatic cutting at stopover points**

While creating the video, *Vasco da Gama* will automatically cut the film at all stopover points with a stop time greater than 2 frames if you activate this function. Several files are created as a result. *Vasco da Gama* attaches the section number to the file name you have specified (e.g. 'My_Route_3.avi' for the 3rd section).

Automatically creating the video sequences makes integration into your video editing program easier. Section 3.1.3.1 on page 9 explained how to set up the stop time.

3.6 Program settings

There are a few settings that influence the appearance and operation of the *Vasco da Gama* software. After installation, you should adjust these settings according to your personal preference. These settings are automatically loaded and used whenever you start *Vasco da Gama*.



- **Window display**

The first setting concerns the size of the *Vasco da Gama* main window. If “automatic” is selected here, *Vasco da Gama* will open in full screen mode in a window the same size as your Windows desktop. This gives the most space for the *Vasco da Gama* user controls and the map display. If you want to change to a different application while working with *Vasco da Gama*, you can use the Windows `Alt+Tab` key combination to do so.

You can also choose from the resolutions supported by your system. These are all lower than your desktop resolution. If you use one of these resolutions, *Vasco da Gama* will be opened in window mode.

After you change this setting, *Vasco da Gama* will remind you that the new window display will not be activated until you re-start *Vasco da Gama*.

- **Video output settings**

- **Video format:**

This option allows you to choose which file format your films will be saved in. The format you choose here will depend on the application in which you would like to use the *Vasco da Gama* video. To make the choice easier for you, we have compiled a table below, containing popular programs and the formats they support. If you cannot find your program in the list, we would recommend you try DV-type 2 first and if you cannot load this file into your video editing program, then try DV type 1.

You can use raw DV for example, if you want to use the *Vasco da Gama* videos in Apple Macintosh programs such as iMovie or FinalCutPro.

Quicktime also supports this format.
 Finally, *Vasco da Gama* can create files in “Video for Windows” format.
 These files can also be read by older programs.

Program	DV type-1	DV type-2
Adobe® AfterEffects®	✓	✓
Adobe® Premiere Elements®	✓	✓
Adobe® Premiere Pro®	✓	✓
AIST MovieDV 6.0	✓	✓
AIST MoviePackPro 4.0	✓	✓
AIST MovieXone 4.0	✓	✓
Canopus Edius 2.5	✗	✓
Canopus Let's Edit	✗	✓
Magix Video deLuxe 2003/2004	✓	✓
MainConcept EVE 2.0	✓	✓
MainConcept MainActor 5	✓	✓
MainConcept MainVision	✗	✓
Pinnacle Commotion 4.1	✓	✓
Pinnacle Edition 5	✓	✓
Pinnacle Studio 9	✗	✓
ProDad Heroglyph	✗	✓
PureMotion EditStudio 5	✗	✓
Quicktime	✓	✓
SonicFoundry Vegas 4.0	✓	✓
Ulead MediaStudio® 7	✓	✓
Ulead VideoStudio® 6	✗	✓
Ulead VideoStudio® 7	✓	✓
Windows® Movie Maker	✓	✓

- **Preview quality:**
 You can choose between three levels of quality for the preview. Higher quality puts more pressure on your system's resources. If the picture in the preview is choppy, you can reduce the quality here.


- **Rendering quality:**
You can make a similar selection for the creation of the video. The higher the quality is set, the longer *Vasco da Gama* needs to create the video.
- **Quick Help**
If the “Quick Help” is active, you will see a short description about the buttons in the project bar when you move the mouse over them.




4 Tutorial

In this chapter, we would like to use examples to introduce you to using *Vasco da Gama*. We will begin with a very simple route and develop this considerably in the second part so that we will get to know all the functions of *Vasco da Gama*.

For the tutorial, we set the *Vasco da Gama* screen resolution in the program settings to 1024x768 pixels (see chapter 3.6, page 33). If you use a higher resolution, you will have a larger map display. The values that we give in the tutorial for the enlargement of the map will then be different from your values.



4.1 Example 1


Start *Vasco da Gama* and click on  on the project bar. This will display the project settings for the new project. Leave all the settings on the default values and click on “Next”.



For the first route, we want to travel within Germany from Hamburg, through Berlin and Frankfurt (Main) to Munich. Germany may not yet be visible in the new project (for example if you are working with a screen resolution of 1024x768 pixels). Use the wheel under the map to reduce the size of the map until you see Germany (approx. 61%). Now we have to move the start and end points already created to Germany. To do this, left click on the active start point  and keep the mouse button pressed down. Move the point to Germany and let go of the point by releasing the left mouse button. Now we just need the end point . Click on the end point to activate it  and again keep the left mouse button pressed down. Move this point to Germany as well and release it. You can stop moving a point by clicking the right mouse button while moving the point. The point will be returned to its position before it was moved and you can release the left mouse button.

Now adjust the map area so you can see as much as possible of Germany. To do this, use the sliders to the right and underneath the map and use the wheel to enlarge the map.









We will now create the route. To do this, first move the start point  to Hamburg and the end point  to Munich. The best position to place the points is on the red circles to the left of the city names. We still need points for the intermediate stops in Berlin and

Frankfurt. To insert a new point, simply click once on the line showing the route. This creates a new supporting point . However we also made a stop in Berlin and recorded some nice videos of the city.

So we have to convert the supporting point into a stopover point. You will find the setting required to do this in the menu on the right hand side of the window. Change the field “type” from “supporting point” to “stopover point”. The picture of the point now also changes from  to . Move the new stopover point to Berlin. Now we need another stopover point to include Frankfurt in the route as well. Create a new supporting point by clicking on the route line between Berlin and Munich. Change this point into a stopover point too and move it to Frankfurt.

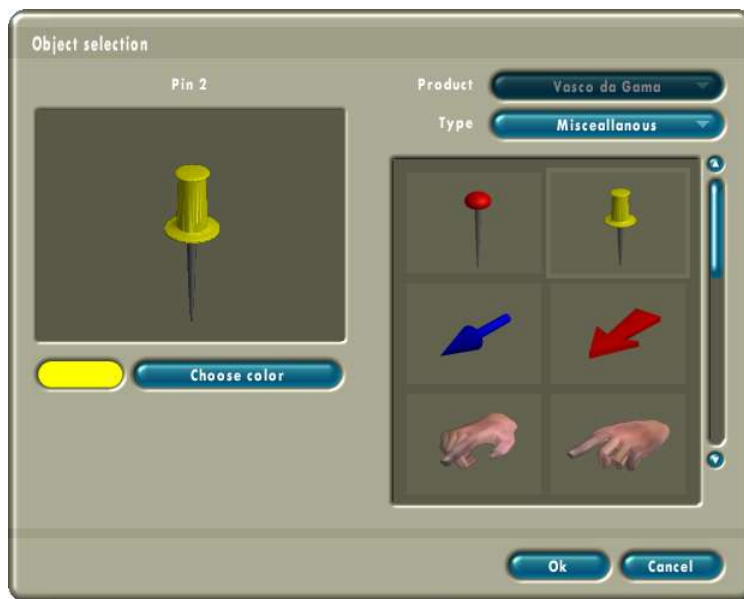


At this point, you should save your work. Click on the  button in the project bar. Name the project “tutorial1”. Vasco da Gama automatically adds the “.prj” file name extension to the name.


Now we can have our first look at the preview video of the route. To do this, click on  in the project bar. The video of the route will be shown in the preview window. Nearly all of Europe can be seen in the video. Since our journey is only in Germany, we do not need all of Europe displayed. Therefore we must adjust the zoom for the camera. To do this, use the tabs above the map to change to camera view. Only the map is visible. Activate the route display by clicking on the  button underneath the map. This will display the route as it is shown in the route view. Now activate the first point on the route (Hamburg) by clicking on the point or the  button. Using the wheel under the map, now adjust the enlargement to 200%. Then activate the next point (Berlin). To do this, click on the  button. We will adjust the zoom here to 150%. We do exactly the same with the next point (Frankfurt). And finally, for Munich, we set it back to 200%. We also want to insert a short pause at each point. Let’s start in Munich. Use the wheel in the menu on the right hand side to set the value for the stop time to about 2 seconds (000:02.00). Now scroll backwards through the stopover points using the  button. Set the stop time to about 2 seconds for every point.

Save the project and have a look at the current preview. Now we can see much more of the course of the route. We also have short pauses at the stops on our journey. But the animation still looks somewhat basic. Therefore we will now introduce 3D objects. Using the tabs in the menu on the right hand side, go into the object settings (middle tab) and enable the display of objects at the stopover point. The “select object” button will then be activated. Click on this button to get into the object selection.





In this menu, select the object type “miscellaneous” and then select the yellow pin. Confirm your selection with “Next”. To make the object easier to see, set its size to 70% using the wheel in the menu.


After we have highlighted our marker points in this way, we now just need a 3D object for the start of the route. This object will be displayed at the top of the yellow line representing the route. Select the start of our route again by clicking on the  button. Change back to the “Points” tab in the menu and this time we will go into the submenu here for the header object. In this submenu, change the setting for the header object from “keep” to “change”. It is now possible to use a new header object at this point on the route.



Now click on the object selection option and this time select the “Cars” object type. Here we will choose the silver limousine. Confirm your selection with “Next”. We can keep the settings for object size and automatic alignment.

You should now save the project again. You can then use the video preview to have another look at the result of our first tutorial.



In the final stage of your work in *Vasco da Gama*, we will create the video file. To do this, click on the  button in the project bar. In the file selection window that follows, enter “tutorial1” for the name. *Vasco da Gama* will again add the correct extension to the name you enter. In this case, the extension is “.avi”. Depending on the processing power of your computer, it can take a while for the film to be created. You can now load the completed film into your video editing program.

4.2 Example 2

We already created a complete travel video in the previous chapter.

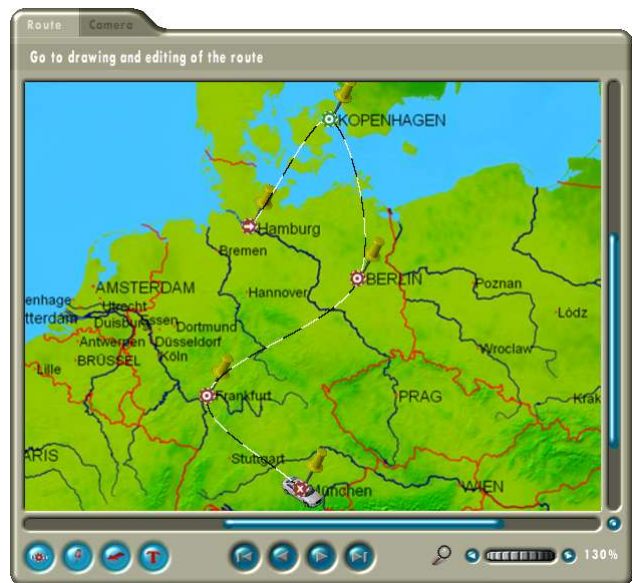
But there are many more functions and details to get to know in *Vasco da Gama*. In this tutorial, we will further develop the project in order to get to know these functions.

Vasco da Gama provides good pre-set values in many areas, which in the last tutorial meant you did not have to adjust many of the settings yourself. In this chapter, we will also examine these settings.

Load the project file from the last tutorial as a template. Our last stop on this journey was Munich. Now we want to bring the route back to Hamburg. You can now give your fingers some exercise by moving all the points so that the start point is in Munich and the end point is in Hamburg.

This time we will stop in Stuttgart instead of Frankfurt. But before we return to Hamburg, we want to visit Copenhagen in Denmark. You therefore need to enter another stopover point between Berlin and Hamburg so that the new route looks something like it does in the picture on the right. Set a stop time of approx. 2 seconds for Copenhagen too.


The course of the route between Berlin and Hamburg is not quite how we would like it. We would need to change to a ship at the Baltic coast and we would not be able to criss-cross the islands between Copenhagen and Hamburg like that in the car. Supporting points can be used to make a better outline of the route. There is no pause at supporting points and no 3D objects are displayed. We need another stopover point however to show the location where the ferry is boarded, e.g. Rostock. Add the new points between Berlin and Hamburg to the route. Don't forget to consider the stop time in Rostock.





Here's another tip for editing the route. It is advisable to work in the route view in order to be able to more accurately position the points. You can edit the points in camera view, but in the route view you can enlarge the map without moving the camera.




Now it's time to save our project. This time, save the project as "tutorial 2". If we have a look at the preview of the video, we can see that the camera has not yet been set up for the new points. Do this now and set the enlargement in Rostock to 180% and in Copenhagen to 200%. Instead of opening the preview to check our work, this time we will move through the animation ourselves. To do this, click on the blue bar in the timeline and drag it slowly to the right using the mouse. As you travel through the timeline, the car moves from the start to the target point.

Let us now turn our attention to changing the vehicle (the header object). To do this, activate the stopover point in Rostock and click on the "Points" tab in the menu and go to the middle submenu . The current selection for the header object is "keep". Set this to "change" and select the first boat from the "watercraft" category. Then activate our stopover point in Copenhagen and change the header object here back to a car.

Save the project and go into the video preview. As planned, the header object changes in Rostock and Copenhagen. However this happens very suddenly. But *Vasco da Gama* has a solution for this too. The header object can be faded in and out using several effects. To use these effects, click on the "Objects" tab and on the submenu  "Fade-in and fade-out properties at stopover point". Both fade effects are currently deactivated. Choose "smooth fade" for both effects and leave the time on the default setting of 1 second. Now we must activate the global fade effect for the stopover points required. To do this, change to the "Points" tab and go to the fade effects submenu  here. On the map, activate the stopover point for Rostock and set the fade-in and fade-out effect to "Global". Do the same for the stopover point for Copenhagen. For the stopover point in Munich, set only the fade-in effect to "Global" and the fade-out effect to "Off". For the stopover point in Hamburg, do the reverse (fade-in effect = "Off" and fade-out effect = "On"). This makes a smoother start and finish at the start and end point of our journey. We have listed the settings again in the following table.

Stopover point	Fade-in effect	Fade-out effect
Munich	Global	Off
Rostock	Global	Global
Copenhagen	Global	Global
Hamburg	Off	Global

Save your project and open the preview. After the initial stopover in Munich, our car fades smoothly into view and starts to move. In Rostock and Copenhagen we see it change from a car to a ship and vice versa. The fade effect looks very nice. Unfortunately we cannot see the location at which we board the ferry, as Rostock is not on the map. But that's not a problem. We'll simply add in the city ourselves.

Activate the stopover point for Rostock. Change to the "Points" tab and go to the submenu  "Text details at stopover point". Switch the display text option from "Off" to "On" In the input box below this option, enter the word "Rostock". We set the

position to “→” and the distance to 5 %. We can already see the text object in the map. But it looks very different from the other text on the map. However you can also change the way text objects appear in *Vasco da Gama*. Since these settings are applied to all text objects on the route, you will find the settings under the “Route” tab. Change to this tab and go to the submenu “Design settings for text”. Click first of all on “choose font / font size” and change the settings to “Arial/Standard/8”. We set the font colour to a dark grey (R=G=B=50) in the colour selection. We deactivate the borders and shadow, so that the new text object looks the same as the others. The word “Rostock” should now look something like it does in the picture on the right.



In the first tutorial, we selected the yellow pin as the stopover object for all stopover points. In this tutorial, we want to select different objects for the start and end of the route. Activate the stopover point for “Hamburg” and change back to the “Points” tab and to the submenu for the stopover objects. The “Object” control is currently set to “Global”. Change this to “Local”. Now you can use a different 3D object for this point. Click “Select object” and choose an object (e.g. the lighthouse from the “Buildings” category). Repeat these steps for the start point of our route. For example, a suitable 3D object for Munich would be the church from the buildings category. However, as happened previously with the pin, the 3D objects are simply placed over the centre of the city. Because of this, they often cover the city name and are also “run over” by the header object. To correct this problem, we will position the objects manually.




Set the values for the position and angle of the stopover points as shown in the two pictures.



Before positioning the objects, it is helpful to move the header object at the stopover point using the button in the timeline. It is then easier to move the stopover object to a position that will not result in overlapping.



Save the project and check in the preview if it meets with your satisfaction. Up to now the progression of the route has been shown by a yellow line leading from the start of

the tour to the current position of the header object. Again, *Vasco da Gama* offers you a range of design options in this regard. Change to the “Route” tab and go to the submenu  “Settings for the line progression”. The option to draw the complete route is currently inactive. Activate the option to draw the complete course of the route. The colour selection will now become active. Now click on “select colour”. In the colour selection, please select an orange colour (R=255, G=200, B=0) and set the transparency to approx. 60.

Now if you look at the video in the preview, you will see a thin orange line, which is overlaid with a thick yellow line as the journey progresses.

We have now almost completed the second tutorial. Before we create the video, you should save your work again. This time we don’t want to create the video as one long film. Instead, we want *Vasco da Gama* to insert cuts at the stopover points and save the video in parts. Now open the project settings  using the project bar. Set the “Automatic partitioning” option to “On” and click on “Next”. Now we can create the video using the  button. Enter “Tutorial2” as the filename. *Vasco da Gama* will now create several files called “tutorial2_1.avi”, “tutorial2_2.avi” and so on. You can now load the individual video sequences into your video editing program.

5 Troubleshooting

If *Vasco da Gama* encounters a problem starting or while running, it will display an error message.

You will probably never see most of the error messages. These error messages relate to low system resources such as main memory. If your Windows system is configured properly, data on the hard drive can be swapped out (virtual memory) if there is a shortage of memory.

Therefore errors like these only happen if the hard drive is full. It is generally advisable to ensure that there is always enough free space on the “C” partition (50 MB is enough).

Vasco da Gama needs a powerful graphics card. If the program does not start for you or an error message appears shortly after starting, please contact our support department.

If you use the “Video for Windows” format to create the videos, it is possible that your video will not be created properly. External compression algorithms are used for this format and sometimes they do not work with all programs. If this happens, try using the DV format type 1 or 2.




6 Support

You can get more help on problems with *Vasco da Gama* and information on the latest software updates at our website or by email:

Website: <http://www.motionstudios.de>

Email: support@motionstudios.de

Please note that to avail of support, you must be a registered customer of the *Vasco da Gama* software. To allow us to make a speedy response to your email request, please include the following information:

- The version number of your *Vasco da Gama* software:
You will find this in the information window, which you can open using the  button in the project bar.
- The serial number of your product:
This number is printed on the registration card and on the back of the booklet and also displayed in the information window.
- Your address:
Please also make sure to let us know your address so that we can check this against the registered details.

7 Glossary

16:9

Widescreen format that is also used in the cinema. Many TV sets now also use the widescreen format.

4:3

Aspect ratio of most TV sets. The picture is only slightly greater in width than height.

AVI

The standard file format for videos on Windows systems. The AVI format describes the structure of the file and can contain various video formats. Therefore AVI format is also called a container format.

DV

Digital Video, standard for digital video recording using camcorders.

FPS

“Frames Per Second”. The refresh rate is given in “frames per second” i.e. how many frames are shown in every second of video.

HSV

Colour model consisting of the Hue, Saturation and Value components.

Interlace

Interlaced mode in video technology, in which a frame is divided into two fields (half frames) with even and odd scan lines. These fields are then played in quick succession and the only noticeable effect is a slight flicker.

NTSC

Video standard used primarily in the USA but also in other countries such as Japan e.g. 720x480 pixels at a refresh rate of 60 Hz.

PAL

This video standard is used primarily in European countries, e.g. 720x576 pixels at a refresh rate of 50 Hz.

RAW-DV

This is not actually a file format. A file with RAW DV video data contains only the bare video data and no file header recording additional data such as the video resolution.

RGB

Additive colour model consisting of the components Red, Green and Blue. When all three components are at zero, the colour black is produced. When all three components are at their highest level, white is produced. This is why it is called “additive” – white is obtained from adding the colour components.

Video for Windows

Standard video format for Microsoft Windows systems. Files in this format usually have the ending “.avi”. Different methods can be used to store video data in these files.

Widescreen (2,35:1)

Also known as Cinemascope and Panavision. This format is a little wider than the 16:9 widescreen format of modern TV sets.

Zoom

Enlarges (more details) or reduces (better overview) a section of an image.

8 Keyboard shortcuts

Except for text input, *Vasco da Gama* is operated using the mouse. Apart from this, there are also keyboard commands. This makes it easier to use for the advanced user, since some actions can be carried out more quickly.

Vasco da Gama contains the following keyboard commands:

Keyboard shortcut	Meaning
Ctrl – C	Copy: Copies the data from the active supporting point into a buffer memory.
Ctrl – S	Swap: Supporting point ↔ Stopover point. A supporting point is turned into a stopover point and vice versa.
Ctrl – V	Paste: Copies the data from the buffer memory into the active supporting point.
Ctrl - I	Insert: Inserts a supporting point.
Page Up	to the previous point
Page Down	to the next point
Home	to the first point
End	To the last point
Insert	to the last point
Delete	Removes point
Enter key	Activates point
Esc	Deactivates point

9 3D Object Gallery

The following pages depict small pictures of all the 3D objects included in *Vasco da Gama*.



Cars

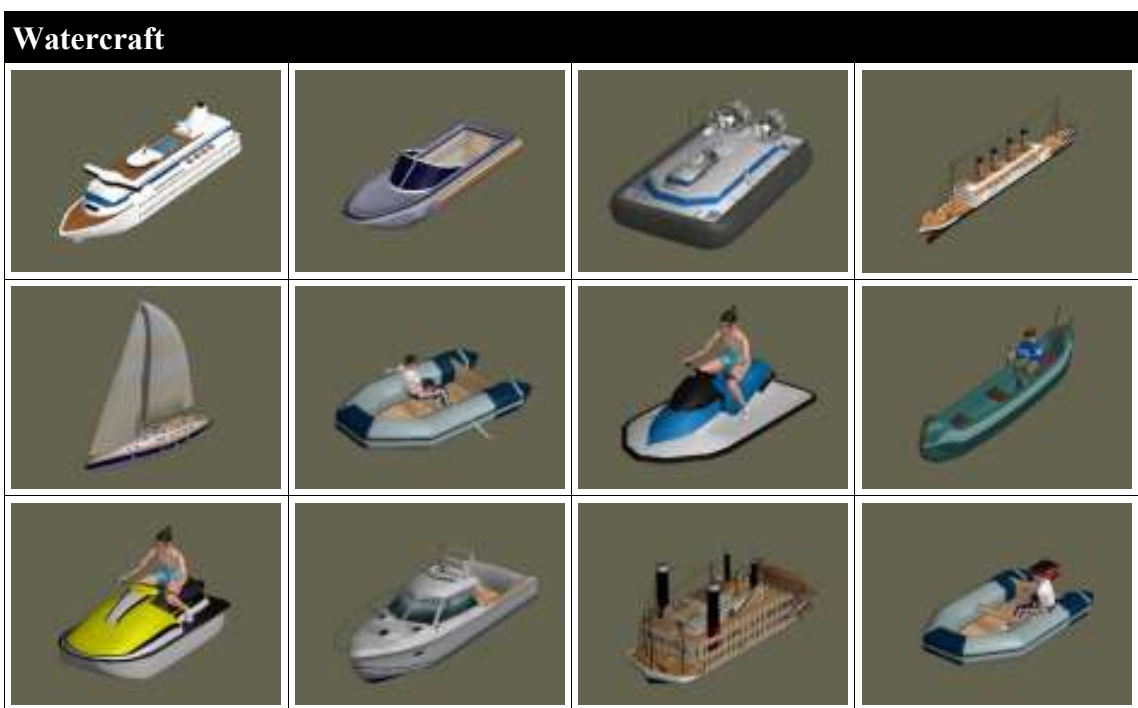


Buses and vans



Aircraft






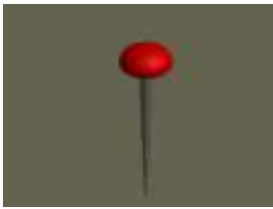

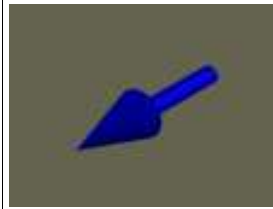



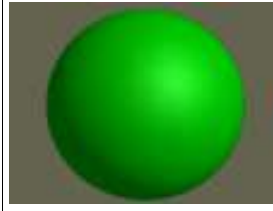
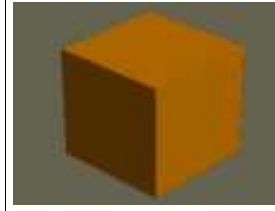

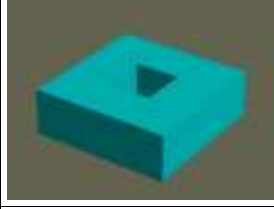





People and animals



Buildings



Buildings			
			

Miscellaneous			
			
			
			
			

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