SHAFT MODELLING USING THE SOFTWATE PACKAGE CATIA V5 AND CREATING OF THE TUTORIAL APPLYING THE ADOBE CAPTIVATE TOOL

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ABSTRACT
This paper shows the procedure of a shaft model manufacturing by application of the software package CATIA V5. Using the screencasting tool Adobe Captivate a tutorial for the shaft modeling procedure has been created. Since the shaft is a very reliable and the most frequent element in compositions for the transmission of the rotary movement and power, we consider that it is an element representative enough for students as well as engineers who have been practically applying software package CATIA V5 for creating technical drawings.
Keywords: CATIA, Shaft, Adobe Captivate

1. INTRODUCTION

Screencast tools are used for creating simulations, demonstrating the software and practising on the grounds of the established scenario. Screencast represents the film that „catches" all the actions that take place on the computer screen, together with the explanations of those actions. Such survey can look like a formal PowerPoint presentation with narration, software demo recording of a particular informal concept containing several basic steps. Even though particular screencast recordings often contain improvized inventions by a narrator, or even small errors, they can be more accessible and therefore more effective than lavishly packaged video instructions. Good screencast products seem clear, reliable and authentic. Whereas the end product can seem simple, its manufacturing requires a great amount of time which implies planning and graphic organization of illustrations for the particular theme so that it can be explained in clear but also in an interesting way [1]. Long tutorials can be very demanding for presentations as a single screencast recording, but it is also possible to create series of short films for one specific task and then present them together for the users who would like to spend more time in studying the established theme. If the audience consist of beginners, it might be necessary to include even more detailed, step by step instructions or some additional resources into the screencast film [2].

2. ADOBE CAPTIVATE TOOL PERFORMANCES

Adobe Captivate creates a high quality software which saves time to lecturers while creating operating instructions (tutorials) and presentations.The site http://www.adobe.com/products/captivate/ contains possibilities of purchase choice of the Adobe Captivate 3 programme for the coresponding operating system [3].
The Adobe Captivate includes a great number of options which are mentioned further in the text. It can automatically record all the actions on the screen while using the application, including mouse

movement and keyboard usage. It saves time and produces clear software simulations with modules for learning within one recording session, including procedures demonstrations and simulations for practising and assignments. It also enables the choice between modules for recording demo or simulations. It uses AutoText Captions characteristic to automatically create headlines that contain textual description of actions. It enables the adjusting of the outlook, size, orientatiion, font, size, colour and text formating. It makes possible audio comments recording either simultaneously with screensaving or subsequently. It can easily synchronize audial recording with slides. It enables the correction of errors and pauses, or the addition of external audio recordings to presentations with the help of audio editors. The Adobe Captivate converts PowerPoint slides into SWF files keeping the animation effects at the same time. It chooses among the adjustable forms for quizzes such as multiple choice, gap filling, merging and even more. It improves the users' knowledge by the possibility of random choice of a particular set of questions. It changes the sequence of the offered answers within questins so that the answers always appear in different order.
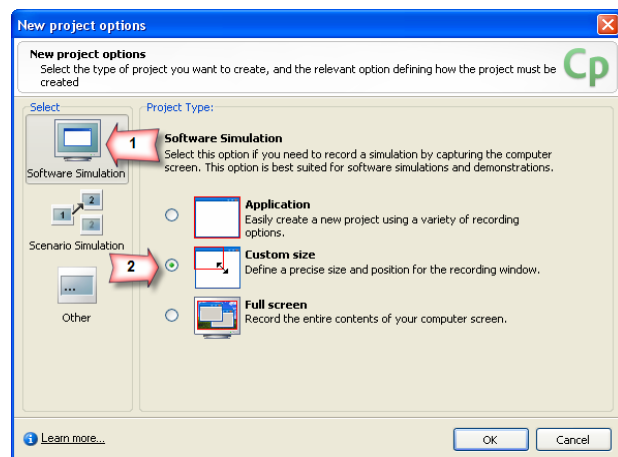
3. THE PROCEDURE OF CREATING AND ARRANGING CATIA V5 TUTORIAL

The procedure of creating the tutorial is explained on the example of shaft model manufacturing by programme package CATIA V5. This tutorial contains the explanation of the procedure for creating a draft and the profiles with defined dimensions as well as the manufacturing of particular shaft segments. There are also explanations of the production procedures of possible complex forms within the shaft (grooves, outlets, hacks, rounding-outs, etc). The modelling has been done within Mechanical Design Module withthe usage of tool bar Sketcher and certasin Part Design standard functions, i.e. 3D modelling basis [4].

Before the beginning of the tutorial recording, the programme CATIA V5 is started and the suitable window is chosen. Then the Adobe Captivate Tool is started and Record link or crate a new project is chosen (picture 1). Thus the New project options window (picture 2) is started. The project type and the relevant options by which the procedure of project creating is defined can be chosen within this window.
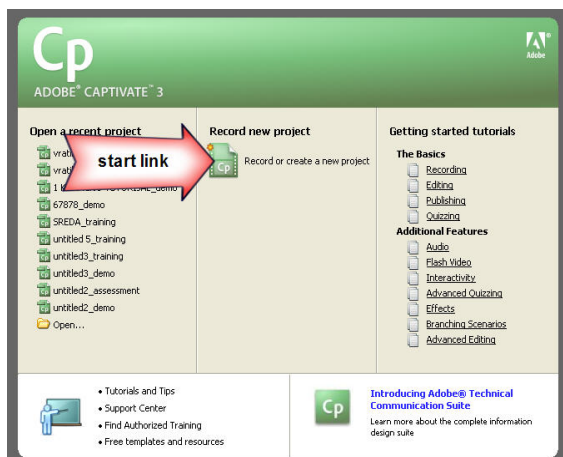

Picture 1. Starting Recording link   Picture 2. Description of New project options survey

This paper shows the option Software Simulation and then the option Customize size by which the precise adjustment of the position and the size of the window can be done. When clicking OK button, a new widow (picture 3) is opened, which includes additional adjustments of recordings. The application which is to be recorded is chosen from the drop menu and then in the top right-hand corner of the windows offered, the recommended size of the window that is being recorded is chosen. When the size of the window for the recording is satisfactory, the window of the CATIA programme is automatically "fitted" within the red rectangle boundaries by clicking the Snap to fit button. In the Recording part of the window, the option Recording mode(s) is chosen and within that option the Demonstration option is chosen. The Record Narration option has not been selected within the Audio part of the window because the audio comment has been added subsequently into this paper. When all the options have been adjusted, the recording starts by clicking the Record button.
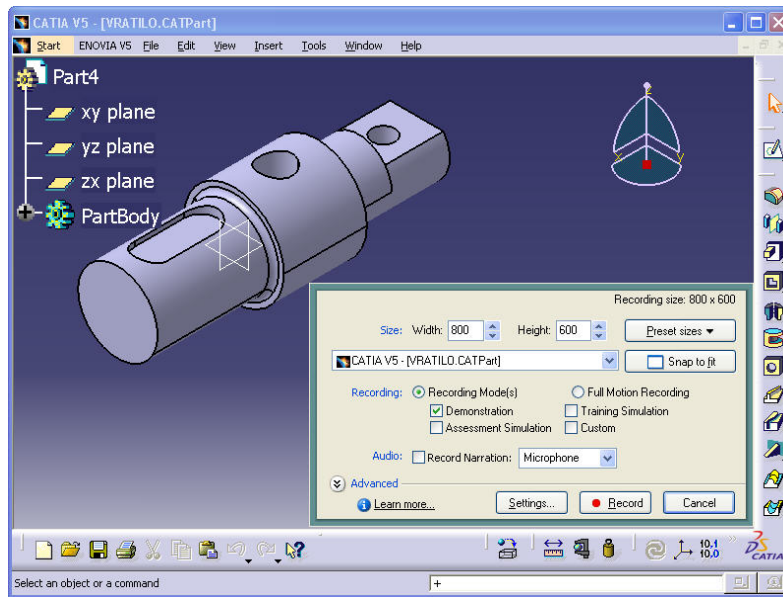
Picture 3. Additional Recording Adjustments

All the activities connected to the shaft model manufacturing have been done within the recording process. Recording is stopped when the End button has been pressed on the keyboard. When the Adobe Captivate recording is finished, Save Project Files window is opened. The name of the project and location are chosen within that window. The project will be saved by clicking the OK button.

The arranging procedure implies the arranging of the slides since the Adobe Captivate automatically separates the recorded film into slides (picture 4).
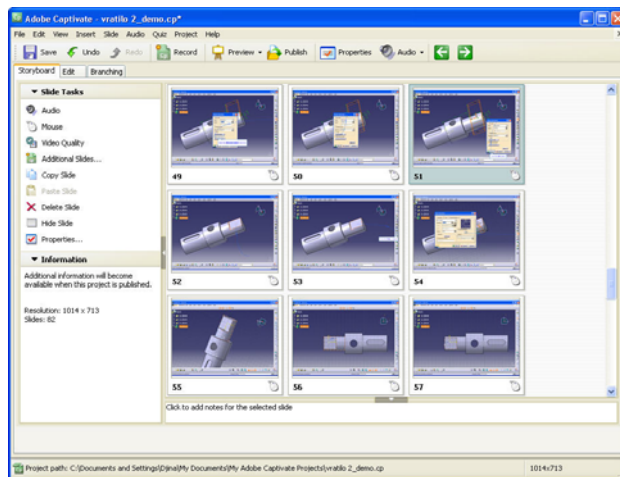
*Picture 4. Description of the initial window for slides arrangement*
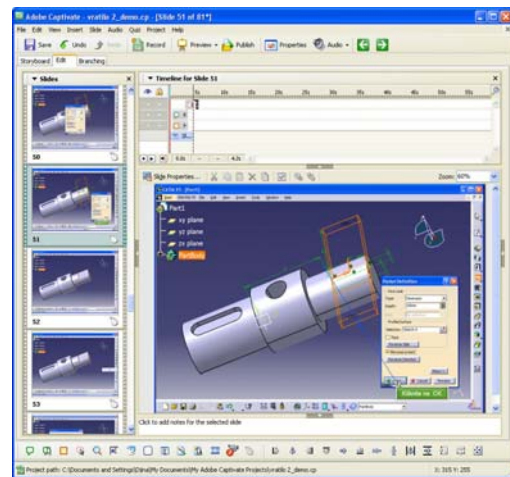
Picture 5. Description of a single slide arrangement

There are options for arranging each of the shown slides (picture 5) in the left-hand part of the Slide Tasks toolbar window. Arranging begins with the double click on the desired slide which enables the opening of the window in whose left part there is a list of slides within the recorded project while the chosen slide is in the central part of the window. Above the shown slide there is the Timeline for Slide window which consists of recordings, or in other words, tapes for each object on the slide. While recording the project, the attention was not paid to the mouse path since the Adobe Captivate enables its subsequent arrangement. The Mouse Properties window is opened by double clicking on the tape for arranging the mouse. The outlook of the pointer, the sound, presentation time and some other options can also be adjusted within this window. Among other things, the Options card offers the option which enables the straight-line path of the mouse. The Text Caption window is opened by double clicking on the tape for remarks arrangement. The changes of the outlook and remarks texts

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have been done within the window. Options card enables the change of the time of remark description.

The Audio drop menu in the tool bar allows the choice of adding comments for each slide separately, as well as for the whole project and recording beginning with certain slide. Considering that in this case the audio comment is added for each slide separately, the option Audio/Record this slide is chosen. A new window is opened in whose central part there is a palely shown slide to which the audio comment is added and in the lower part of the window, the Captions and Slide Notes are shown. It is possible to add remarks which refer to the chosen slide within the Slide Notes card. Adobe Captivate automatically extends the time duration of a slide, if it is necessary, in order to adjust it to the time duration of the audio recording. When the recording has been recorded, it appears within Timeline window (picture 6).
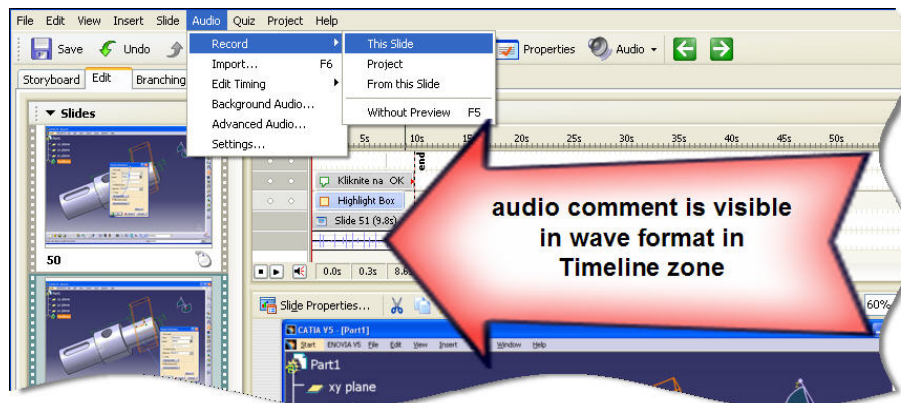
Picture 6. Part of Timeline window

Adobe Captivate has a fitted Audio editor which enables listening to audio file, adding silence into comments, adjusting sound volume as well as some other options. When double clicking on the tape for arranging audio recordings, Edit Audio window opens where previously mentioned options are shown such as Insert silence, Adjust volume, etc.

Publicity represents the process of converting a project into an end product in the format that suits the users of the tutorial. In order to publish a project, the option Publish on the toolbar should be chosen so that the Publish window can be opened where Flash (SWF) format file window is chosen. When clicking Publish button, the process of converting a project into an end product begins. When the process has been finished, the outlook of the project on HTML page can be seen by choosing View Output option.

5. CONCLUSION

With the help of screencast films it can be very efficiently demonstrated how the software applications can be seen. The Adobe Captivate tool creates a high quality software which saves time to lecturers while creating operating instructions (tutorials) and presentations. Presentations made by using this programme help the understanding of the material which cannot be explained well by using text and pictures only. Within the recording process different functions of Adobe Captivate tools have been used and conclusion can be drawn that this tool is suitable for creating CATIA V5 tutorial and it is representative enough for education.

6. REFERENCES

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