ICST Transactions Preprint

Virtual Skiing

Tomazic, Tomaz; Luis

University of Ljubljana, Faculty of informatics and computer science

Abstract

This paper describes a virtual skiing game using technology such as kinect and unity 3D.

Keywords: skiing, kincect, unity 3D, virtual

1. Introduction

The interactive installation âĂIJVirtual skiingâĂİ enables a visual immersion into the feelings of gliding on snow through a winter landscape. The computer rendered winter landscape is displayed over the entire wall in front of the skier. As on real skis you can regulate the speed of descent by changing the posture of your body so that the air resistance is decreased or increased. By shifting the weight of your body to the right or left ski you can make turns down the slope between the snow capped trees. The interface to the virtual world is implemented by computer vision techniques which capture the posture of the skierâĂŹs body. [**?**]).

2. The three golden rules

Before we proceed, we would like to stress *three golden rules* that need to be followed to enable the most efficient use of your code at the typesetting stage:

(i) keep your own macros to an absolute minimum;

(ii) as TEX is designed to make sensible spacing decisions by itself, do *not* use explicit horizontal or vertical spacing commands, except in a few accepted (mostly mathematical) situations, such as `\,` before a differential d, or `\quad` to separate an equation from its qualifier;

(iii) follow the *ICST Transactions* reference style.

3. Getting started

The icst class file should run on any standard LATEX 2_ε installation. If any of the fonts, style files or packages it requires are missing from your installation, they can be found on the *TEX Collection* DVDs or from CTAN.

ICST Transactions are published using a combination of Kp-Fonts and Iwona typefaces. This is achieved by using the `fonts` option as
`\documentclass[fonts]{icst}`.
If for any reason you have a problem using this combination you can easily resort to Computer Modern fonts by removing the `fonts` option.

4. The article header information

The heading for any file using icst.cls is shown in Figure 1.

4.1. Remarks

(i) In `\runningheads` use *'et al.'* if there are four or more authors.

(ii) Note the use of `\tnoteref{<id num>}` and "`\tnotetext[<idnum>]<Text>`" for setting footnotes to the title

Also note the use of `\fnoteref{<id num>}` and `\fnotetext[<id num>]{<Text>}` for setting footnotes to author names. At least one of these must identify the 'Corresponding author' (as in the example shown in Figure 1)

(iii) For submitting a double-spaced manuscript, add `doublespace` as an option to the documentclass line.

(iv) The abstract should be capable of standing by itself, in the absence of the body of the article and of the bibliography. Therefore, it must not contain any reference citations.

(v) Keywords are separated by commas.

5. The body of the article

★Please ensure that you use the most up to date class file, available from XXXXX at ...
*Corresponding author. Create-net address?

```
\documentclass[fonts]{icst}
%\documentclass[fonts,doublespace]{icst}%For paper submission

\begin{document}

\runningheads{<Initials and Surnames>}{<Short title>}

\title{<Initial caps>}
%\title{<Initial caps>\tnoteref{1}}

\author{<An Author\affil{1}, Someone Else\affil{2}\fnoteref{1},
Perhaps Another\affil{1}>}

\address{<\affilnum{1}First author's address
(in this example it is the same as the third author)\\
\affilnum{2}Second author's address>}

%\tnotetext[1]{<Footnote to the title, if needed>}

\fnotetext[1]{Corresponding author. \email{<email address>}}
%Corresponding author is the second author in this example

%\fnotetext[2]{<Text as needed>}

\abstract{<Text>}

\keywords{<List keywords>}

\maketitle

\section{Introduction}
.
.
.
```

Figure 1. Example header text

5.1. Mathematics

icst.cls makes the full functionality of $\mathcal{AMS}$TEX available. We encourage the use of the `align`, `gather` and `multline` environments for displayed mathematics. `amsthm` is used for setting theorem-like and proof environments. The usual `\newtheorem` command needs to be used to set up the environments for your particular document.

5.2. Figures and Tables

icst.cls includes the graphicx package for handling figures.

Figures are called in as follows:

```
\begin{figure}
\centering
\includegraphics{<figure name>}
\caption{<Figure caption>}
\end{figure}
```

For further details on how to size figures, etc., with the graphicx package see, for example, [1] or [3]. If figures are available in an acceptable format (for example, .eps, .ps) they will be used but a printed version should always be provided.

The standard coding for a table is shown in Figure 2.

5.3. Cross-referencing

The use of the LaTeX cross-reference system for figures, tables, equations, etc., is encouraged (using `\ref{<name>}` and `\label{<name>}`).

5.4. Appendices

Code appendices as follows.

```
\begin{appendices}
\section{<The first appendix title>}
```

```
\begin{table}\small\sf
\caption{<Table caption>}
\centering
\begin{tabular}{<table alignment>}
\toprule
<column headings>\\
\midrule
<table entries
(separated by & as usual)>\\
<table entries>\\
.
.
.\\
\bottomrule
\end{tabular}
\end{table}
```

Figure 2. Example table layout

```
.
.
.
\subsection{The first subappendix}

\appendix
\section{<The second appendix title>}
.
.
.
\end{appendices}
```

5.5. Acknowledgements

An Acknowledgements section is started with `\ack` or `\acks` for *Acknowledgement* or *Acknowledgements*, respectively. It must be placed just before the References.

5.6. Bibliography

The *ICST Transactions* allows either the Vancouver or Harvard reference style. The default style is Vancouver, but the Harvard style can be achieved easily by using the `authoryear` option as:
`\documentclass[...,authoryear]{icst}`.

Please note that the file `icst.bst` is available from the same download page for those authors using BibTeX (which works for Harvard or Vancouver style references).

5.7. Double Spacing

If you need to double space your document for submission please use the `doublespace` option as shown in the sample layout in Figure 1.

6. Support for icst.cls

We offer on-line support to participating authors. Please contact us via e-mail at ...

We would welcome any feedback, positive or otherwise, on your experiences of using `icst.cls`.

7. Copyright statement

Please be aware that the use of this LaTeX 2_ε class file is governed by the following conditions.

7.1. Copyright

<To be decided>

7.2. Rules of Use

<To be decided>

Acknowledgement. This class file was developed by Sunrise Setting Ltd, Torquay, Devon, UK. Website:
www.sunrise-setting.co.uk

References

[1] Solina Franc and Batagelj Borut (2003) *http://black.fri.uni-lj.si/ski/*
[2] Lamport L. (1994) *LaTeX: a Document Preparation System* (Addison-Wesley), 2nd ed.
[3] Mittelbach F. and Goossens M (2004) *The LaTeX Companion* (Addison-Wesley), 2nd ed.