

The **apxproof** package*

Proofs in Appendix

Pierre Senellart
pierre@senellart.com

October 28, 2016

1 Usage

TODO

2 Implementation

```
1 \RequirePackage{fancyvrb}
2 \RequirePackage{ifthen}
3 \RequirePackage{environ}
4 \RequirePackage{bibunits}
5 \let\proof\undefined
6 \let\endproof\undefined
7 \RequirePackage{amsthm}
8 \RequirePackage{etoolbox}
9 \RequirePackage{ifmtarg}
10 \RequirePackage{stack}
11
12 \makeatletter
13 \newwrite\axp@proofsfile
14 \immediate\openout\axp@proofsfile=\jobname.axp
15 \immediate\write\axp@proofsfile{%
16   \noexpand\makeatletter
17   \noexpand\let\noexpand\proof\noexpand\oldproof
18   \noexpand\let\noexpand\endproof\noexpand\endoldproof
19 }
20 \def\FVB@VerbatimOut{%
21   \@bsphack
22   \begingroup
23     \FV@UseKeyValues
24     \FV@DefineWhiteSpace
```

*This document corresponds to apxproof v1.0.0, dated 2016/10/27.

```

25 \def\FV@Space{\space}%
26 \FV@DefineTabOut
27 \def\FV@ProcessLine{\immediate\write\axp@proofsfile}%
28 \let\FV@FontScanPrep\relax
29 \let\@noligs\relax
30 \FV@Scan}
31 \def\FVE@VerbatimOut{\endgroup\@esphack}
32
33 \let\apxold@proof\proof
34 \let\endapxold@proof\endproof
35
36 \renewenvironment{proof}
37 {\axp@writesection\immediate\write\axp@proofsfile{\noexpand\begin{apxold@proof}}\VerbatimOut
38 {\endVerbatimOut\immediate\write\axp@proofsfile{\noexpand\end{apxold@proof}}}
39
40 \newcommand{\appendixrefname}{References for the Appendix}
41
42 \AtEndDocument{%
43 \clearpage\onecolumn\appendix
44 \begin{bibunit}[alpha]%
45 \immediate\closeout\axp@proofsfile\input{jobname.axp}%
46 \renewcommand{\refname}{\appendixrefname}%
47 \putbib
48 \end{bibunit}%
49 }
50
51 \let\apxold@bibliography\bibliography
52 \renewcommand\bibliography[1]{%
53 \defaultbibliography{#1}%
54 \apxold@bibliography{#1}%
55 }
56
57 \newcounter{axp@rpcounter}
58 \newcounter{axp@seccounter}
59
60 \newcommand{\newtheoremrep}[2]{%
61 \newtheorem*{axp#1rp}{#2}%
62 \expandafter\let\csname #1\endcsname\undefined
63 \expandafter\let\csname c@#1\endcsname\undefined
64 \newtheorem{#1}{#2}%
65 \NewEnviron{#1rep}[1][1]{%
66 \addtocounter{axp@rpcounter}{1}%
67 \begin{#1}[##1]\label{axp@r\roman{axp@rpcounter}}\BODY\end{#1}%
68 \global\expandafter\let\csname rplet\roman{axp@rpcounter}\endcsname\BODY%
69 \axp@writesection%
70 \immediate\write\axp@proofsfile{%
71 \noexpand\begin{axp#1rp}[\noexpand\ref{axp@r\roman{axp@rpcounter}}]\@ifnotempty{##1}{\noexpand\label{\noexpand\label{\noexpand\gobble%
72 \noexpand\let\noexpand\label\noexpand\@gobble%
73 \expandafter\noexpand\csname rplet\roman{axp@rpcounter}\endcsname\noexpand\end{axp#1rp}
74 }

```

```

75   }
76 }
77
78 \def\apx@sectitle{}
79
80 \let\apxold@section\section
81 \def\section{\@ifstar\@section{\@dblarg\@section}}
82 \def\@section#1{%
83   \global\edef\apx@sectitle{#1}%
84   \apxold@section*{#1}%
85   \addtocounter{axp@seccounter}{1}%
86   \label{axp@s\roman{axp@seccounter}}}%
87 }
88 \def\@@section[#1]#2{%
89   \global\edef\apx@sectitle{#1}%
90   \apxold@section{#1}%
91   \addtocounter{axp@seccounter}{1}%
92   \label{axp@s\roman{axp@seccounter}}}%
93 }
94
95 \newcommand\axp@writesection{%
96   \ifx\apx@sectitle\empty
97   \else
98     \immediate\write\axp@proofsfile{\noexpand\def\noexpand\tmp{\noexpand\ref{axp@s\roman{axp@seccounter}}\noexpand\apx@sectitle}}%
99     (\apx@sectitle)}}%
100   \global\def\apx@sectitle{}%
101   \fi
102 }
103
104 \newenvironment{proofsketch}
105   {\vskip3pt\noindent\emph{Proof sketch.} }
106   {\hfill\qed\vskip3pt}
107
108 \newenvironment{toappendix}
109   {\axp@writesection\VerbatimOut}
110   {\endVerbatimOut}
111
112 \ifdefined\@acmtitlebox
113   \newtheoremstyle{mystyle}%
114     {3pt}
115     {3pt}
116     {\itshape}
117     {}
118     {\scshape}
119     {.}
120     {.5em}
121     {}
122   \theoremstyle{mystyle}
123
124   \newcommand{\refname}{REFERENCES}

```

```

125 \patchcmd{\thebibliography}{References}{\protect\refname}{}{}
126 \patchcmd{\thebibliography}{References}{\protect\refname}{}{}
127
128 \renewcommand{\appendixrefname}{REFERENCES FOR THE APPENDIX}
129 \fi
130
131 \def\thmhead#1#2#3{%
132 \thmname{#1}\thmnumber{\@ifnotempty{#1}{ }\@upn{#2}}%
133 \thmnote{ #3}}
134
135 \makeatother

```

Change History

v1.0.0
General: Initial version 1

References for the Appendix

- [BP98] Sergey Brin and Lawrence Page. The anatomy of a large-scale hypertextual Web search engine. *Computer Networks*, 30(1–7):107–117, April 1998.
- [sit08] sitemaps.org. Sitemaps XML format.
<http://www.sitemaps.org/protocol.php>, February 2008.