

The **apxproof** package*

Proofs in Appendix

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October 27, 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 \AtEndDocument{%
41 \clearpage\onecolumn\appendix
42 \begin{bibunit}[alpha]%
43 \immediate\closeout\axp@proofsfile\input{\jobname.axp}%
44 \providecommand{\refname}{References for the Appendix}%
45 \putbib
46 \end{bibunit}%
47 }
48
49 \let\apxold@bibliography\bibliography
50 \renewcommand\bibliography[1]{%
51 \defaultbibliography{#1}%
52 \apxold@bibliography{#1}%
53 }
54
55 \newcounter{axp@rpcounter}
56 \newcounter{axp@seccounter}
57
58 \let\apxold@label\label
59 \renewcommand{\label}[1]{%
60 \ifcsname c@#1\endcsname
61 \else
62 \newcounter{#1}\apxold@label{#1}%
63 \fi
64 }
65
66 \def\thmhead#1#2#3{%
67 \thmname{#1}\thmnumber{\@ifnotempty{#1}{ }\@upn{#2}}%
68 \thmnote{ #3}}
69
70 \newcommand{\newtheoremrep}[2]{%
71 \newtheorem*{axp#1rp}{#2}%
72 \newtheorem{#1}{#2}%
73 \NewEnviron{#1rep}[1][]{%
74 \addtocounter{axp@rpcounter}{1}%

```

```

75 \begin{#1}[##1]\apxold@label{axp@r\roman{axp@rcounter}}\BODY\end{#1}%
76 \global\expandafter\let\csname rplet\roman{axp@rcounter}\endcsname\BODY%
77 \axp@writesection%
78 \immediate\write\axp@proofsfile{%
79 \noexpand\begin{axp#1rp}[\noexpand\ref{axp@r\roman{axp@rcounter}}]\@ifnotempty{##1}{\n
80 \expandafter\noexpand\csname rplet\roman{axp@rcounter}\endcsname\noexpand\end{axp#1rp}
81 }
82 }
83 }
84
85 \def\apx@sectitle{}
86
87 \let\apxold@section\section
88 \def\section{\@ifstar\@section{\@dblarg\@section}}
89 \def\@section#1{%
90 \global\edef\apx@sectitle{#1}%
91 \apxold@section*{#1}%
92 \addtocounter{axp@seccounter}{1}%
93 \label{axp@s\roman{axp@seccounter}}}%
94 }
95 \def\@section[#1]#2{%
96 \global\edef\apx@sectitle{#1}%
97 \apxold@section{#1}%
98 \addtocounter{axp@seccounter}{1}%
99 \label{axp@s\roman{axp@seccounter}}}%
100 }
101
102 \newcommand\axp@writesection{%
103 \ifx\apx@sectitle\empty
104 \else
105 \immediate\write\axp@proofsfile{\noexpand\def\noexpand\tmp{\noexpand\ref{axp@s\roman{axp@seccounter}}}%
106 (\apx@sectitle)}}%
107 \global\def\apx@sectitle{}%
108 \fi
109 }
110
111 \newenvironment{proofsketch}
112 {\vskip3pt\noindent\emph{Proof sketch.} }
113 {\hfill\qed\vskip3pt}
114
115 \newenvironment{toappendix}
116 {\axp@writesection\VerbatimOut}
117 {\endVerbatimOut}
118
119 \makeatother

```

Change History

v1.0.0

General: Initial version 1

References

- [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.