5Q-06 %7%g%C%H$NJ,N`$K4pE/1GA|%G!<%?XN<+F0E*:w0zIU

0f<j 0lO:,   ;3K\ 98;J,   EDCf 1QI'
{ide,kyama,tanaka}@mtl.t.u-tokyo.ac.jp
El5~Bg3XBg3X1! 9)3X7O8&5f2J*

1 O8aK

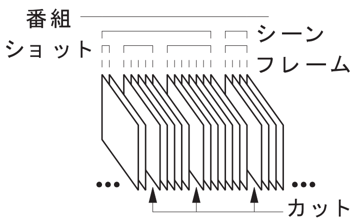
1.1 35MW

MM!9JG^BNrDL8FDs6!5l$k%^%k%A%a%G%#%"!"1GA|>pJs$NA}2C$KH<$$!":FMxMQ$d8!:w$rMF0W$K<B8=$9k?aN<+F0E*$J:w0zIU$1$N<{MW$,9b$^$C$F$$$k!#

K\8&5fGO!"%7%g%C%H (O"B3$7$?1GA|$N:G>.AGJR!D1.2 $GDj5A) C10L$NJ,N`$K4p$E$-!"J,N`Kh$K%-!<%o!<%I$rA*BrE*$KIUM?$9k3HKhj!"%7%g%C%H$H$$$&;~4VE*$KC;$$6h4V$K!"1GA|FbMF$KB'7?:w0zIU1r;n$_$?!#$=$N7k2L!":w0zIU1N<{MW$,9b$$%K%e!<%9HVAHKBP7!"2q8+JIKD$$$F?MJ*$r 6 3d!"=82q$JIK$D$$$F>l=j$r 9 3d0J>e$N@:EY$G:w0zIU$1$9$k3H$,$G$-$?!#

1.2 MQ8l$NDj5A

0lHL$K1GA|$O!"?^ 1$K<($9h&$J3,AX9=B$$H7FDj5AG-$k!#



?^ 1: 1GA|$N9=@.$HMQ8l$NDj5A

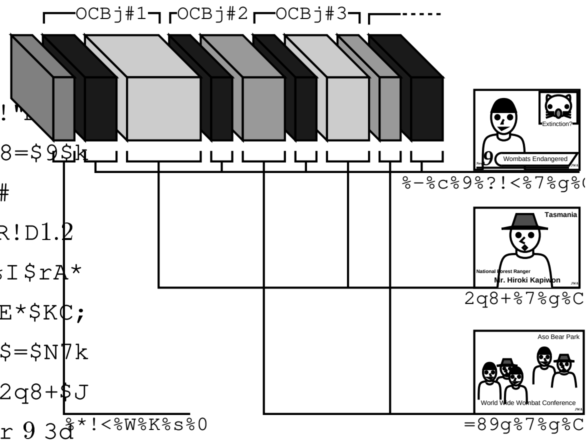
K\8&5f$G<g$K07$&%7%g%C%H$H$O!"2hA|E*$K@Z$lL\$J$/$O"B3$7$?@E;_2hA| (%U%l!<%`) $N=89g$N3HG"$j!"$[$\F10l1GA|FbMF$,7QB3$9$k:G>.AGJRH_J;$k!#$^$?!"%7%g%C%HF1;N$N6-3&$r%+%C%H$H8F$V!#

2 %7%g%C%HJ,N`$K4p$E$/:w0zIU$1

2.1 A4BN9=@.

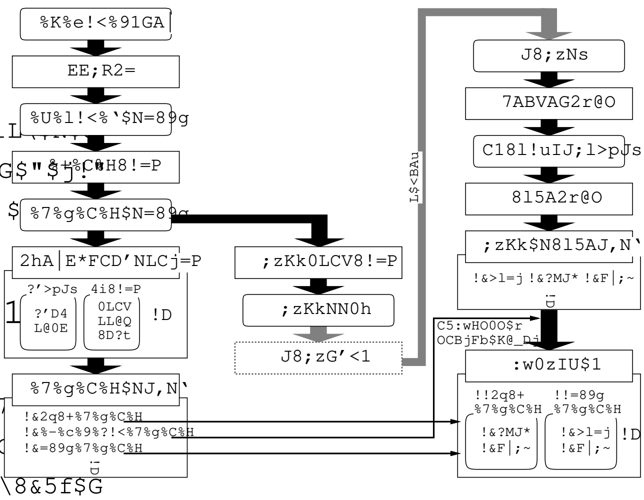
0lHL$K%K%e!<%9HVAH$O!"?^ 2$K<($9h&$JE57?E*$J%7%g%C%H$,EY!9=P8=$9$k!#$^$?!"OCBj$N@hF,GO%-%c%9%?!<$,%?%$%H%k$H6&$K1Gk3H,B?$$!#$=$3$GK\8&5f$G$O!"%K%e!<%91GA|$+$i?^ 2$K<($9 3 DNE57?E*%7%g%C%H$r4JC1$J2hA|=hM}Kh$jJ,N`$7!"3F!9$KE,7?:w0zIU1r9T$&!#?^ 3K=$N<jK!$NA4BN9=@.$r<($9!#

:w0zIU1K$O!"1GA|FbMF$rC<E*$KI=$9;zKk$N8l5A$r2r@O7F%-!<%o!<%I8uJdH7$?$bN+$i!"3F%7%g%C%HJ,N`$N1GA|FbMF$KE,$7$?8l5A$rbDbN$rA*BrE*$KIUM?9k!#F1MM$N;n$_$OCfB<$i [1] $b9T$C$F$$$k$,!"K\8&5f$G$OF|K\8l%K%e!<%91GA|$rBP>]K7$F$$$k$?$a!"<+A38@8l$N07$$$,0[Jk!#



?^ 2: %K%e!<%9HVAH$N9=@.

J*!"2hA|=hM}$H<+A38@8l=hM}$N>\:YKD$$$F$O [4] $H [3] $r;2>H$5l?$$!#



?^ 3: %7%g%C%HJ,N`$K4p$E$/:w0zIU$1<jK!$NA4BN9=@.

2.2 %7%g%C%H$N2hA|E*J,N`

?^ 3$K<($9h&$K!"%K%e!<%91GA|$r2hA|E*FCD'NL$K4p$E$-0J2<$N 3 DNE57?E*$J%7%g%C%H$H$=$NB>$KJ,N`$9$k!#

- 2q8+%7%g%C%H

  4iNN0h$rCj=P$7!"0lDj$NNN0h$K82CxJbN, 1, 2 8DB8:_9kbN$rJ,N`$9$k!#:G=*E*$K$O<!$N!V%-%c

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* “Automatic Indexing to Video based on Shot Classification”
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%9%?!<%7%g%C%H!W$K3:Ev$9kbNr>J$/!#

- %-%c%9%?!<%7%g%C%H
  !V2q8+%7%g%C%H!W4V$N?'>pJs$K4pE/%/%i%9%?%j%s%0$N7k2L!":GBg$N%/%i%9%?rJ9bN$rJ,N`$9$k!#B?$/OCBj$N6-3&$K=P8=$7!":w0zIU$1$N:]$KI,MW$J%K%e!<%9$N9=B$$rGD0.9kNKI,MWHJ$k!#
- =89g%7%g%C%H
  4iNN0h$rCj=P$7!"A42hLL$K82Cx$JbN$,3 8D0J>e$"B8:_9kbN$rJ,N`$9$k!#

3N4p=`Kh$k3F%7%g%C%H$N8!=P@:EY$O!"V2q8+%7%g%C%H!W$,7 3dDxEY,!V%-%c%9%?!<%7%g%C%H!W$,100%,!V=89g%7%g%C%H!W$,3 3dDxEYG"C?!#

2.3 ;zKk$N8l5AJ,N`

;zKk$d2;@<$r$=$N$^$^OCBjA4BN$d=P8=$7$?%7%g%C%H$N%-!<%o!<%IH7$F:w0zIU$1$9$k<jK!$b9T$olF$$$k$,!"A0<T$O:w0zIU$1C10L$N;~4VE*N3EY$,9S$/!"8e<T$O%-!<%o!<%I$H1GA|FbMF$NBP1~$,J]>Z5l$J$$$?$a!"%7%g%C%HC10L$K1GA|FbMFKB'7$?:w0zIU$1$r9T$&N)>l$+$i$OIT==J,$G$"$k!#

$=$Nh&$J:w0zIU$1$r9T$&$?$aKO!";zKk$N8l5A$r$"$kDxEYM}2r9kI,MW$,$"$k!#;zKk$N=P8=0LCV$rCf?4$H7?%K%e!<%9;zKk$N8l5A2r@O<jK! [2] b"k,!"K\8&5fGOHVAH$K0MB8$7$J$$2r@O<jK!H7$F!"KvHx$NL>;l$KCeL\$7$?;zKk$N8l5A2r@O<jK! [3] $r:NMQ$7!";zKk$N8l5A$r?MJ*,>l=j,F|;~,$=$NB>$N$$$:l+$KJ,N`$9$k!#$3$N<jK!$O$*$h$=8!A9 3dDxEY$N@:EY$G2r@O$,2DG=G"$j!"$b$C>e$[$\LdBj$N$J$$$3H,J,$+$C$F$$$k!#

2.4 %7%g%C%HJ,N`JL$N:w0zIU$1

0J>eNh$&$K7F!"%7%g%C%H$r2hA|E*FCD'NL$K4p$E$$$FJ,N`$7!"0lJ}$G;zKk$rKvHx$NL>;l$N<oN`$K4p$E$$$F8l5A2r@O7?7k2L$+$i!"3F%7%g%C%HJ,N`$KE,$7$?:w0zIU$1$r0J2<$Nh&$K9T$&!#

- 2q8+%7%g%C%H
  !V2q8+%7%g%C%H!WGO!"0lHL$KBg<L$7KJCF$$$k?MJ*$,OCBj$KJC$F$$$k2DG=@-$,9b$$!#$=$3$G!"%-!<%o!<%I$H7F$O!"V?MJ*!W$H!VF|;~!W$r:w0zIU$1$k!#
- =89g%7%g%C%H
  !V=89g%7%g%C%H!WGO!"FCDj$N?MJ*$H$$$&hj$O!"$INh$&$J=89gG"k+ (2q9gL>$d3+:E>l=j) $,OCBj$KJC$F$$$k2DG=@-$,9b$$!#$=$3$G!"%-!<%o!<%I$H7F$O!"V>l=j!W$H!VF|;~!W$r:w0zIU$1$k!#

:w0zIU1N:]$O!":w0zIU$1$9$k%7%g%C%H$+$iOCBj$NKAF,$K$"$k!V%-%c%9%?!<%7%g%C%H!W$^$GAL5ZE*$KC)$j!"G$b6a$/K"$k3:Ev$9$k8l5A$N%-!<%o!<%I8uJd$rA*Br$9$k2D

3 <B83

2.4$K<($7$?J}?K$Khj3F%7%g%C%HJ,N`$K:w0zIU$1$r9T$C$?7k2L$N@5EzN($rI= 1$K<($9!#$J$*!"$3$3$G$O:w0zIU$1$K!$rC1FH$GI>2A$9$k$?$a$K!"%7%g%C%HJ,N`$H8l5A2r@O$O40A4KJ5l$F$$$kbN$H2>Dj$7$?!#

%7%g%C%HJ,N`	?M!J*	>l!=j	F|!;~
2q8+%7%g%C%H	63%	—	12%
=89g%7%g%C%H	—	97%	32%

I= 1: %7%g%C%HJ,N`JL:w0zIU$1@.8yN(

>l=j$K4X$9$k:w0zIU$1O[$\40A4$K9T$($?$,!"?MJ*$HF|;~$K4X$7FOM=A[0J>e$K0-$$7k2LHJC?!#

7+$7!"?MJ*$HF|;~HG$O@:EY$,0-$$860x$,0[$J$k!#F|;~$N@:EY$,0-$$$N$O!"$=b=$bF|;~$K4X9k;zKk$=$NbN$,>/$J$$$?aG$"$k!#0lJ}!"?MJ*$K4X$7FO!"Nc$($P%$%s%?%S%e!<$r9TCF$$$k!V2q8+%7%g%C%H!WGO!"2?M$N?MJ*$,8r8_$KEP>l$7Fb!";zKk$O:G=i$N1 2sK7$+I=<($5lJ$$$3H,B?$/!"$=$N8e$N?MJ*:w0zIU1K;Y>crMh7$F$$$k!#3Nh&$J8m$j$O!"OCBj$hjb5i$K:Y$+$$HVAH9=B$$r2r@O7F!"ITO"B3$JF10l1GA|FbMF$N%7%g%C%HKBP7$F:G=i$N;zKk$+$iF@il$k%-!<%o!<%I8uJd$rE,MQ9k3HKh$j2r>C$5lk!#

4 $*$ojK

K\H/I=GO!"2hA|E*FCD'NLKh$k1GA|$NJ,N`$H8l5A2r@O$K$h$k;zKk$NJ,N`$rE}9gE*$KMxMQ7?!"%K%e!<%91GA|$N<+F0E*:w0zIU$1<jK!$r>R2p$7$?!#0MA33F!9$NJ,N`@:EY$N8~>e$,MW5a5lk,!"1GA|FbMFKB'7$F;~4VE*N3EY$N:Y$+$$:w0zIU$1<jK!$H7F!"M-K>G"$k46?($,F@il$?!#

:#8e$O!"8=:_$OWs0UE*$+$D8GDjE*$J1GA|$NJ,N`4p=`$rE}7WE*$K<}=8$9$k<jK!$N8!F$5Z$S!"$h$j:Y$+$$HVAH9=@.$N2r@O$rDL8?:w0zIU$1@:EY$N8~>e$r9T$&!#

;29MJ88%

[1] Nakamura, Y., Kanade, T.: "Semantic Analysis for Video Contents Extraction –Spotting by Association in News Video–"; Proc. The Fifth ACM Intl. Multimedia Conf., pp.393-402 (Nov, 1997).

[2] EOJU LwI', 2,ED ;j90, D9Hx bC: !VTV %K%e!<%9$GMQ$$$ilk%F%m%C%W$N2r@O!W; >pJs=hM}3X2q8&5f2qJs9p 96-NL-116, Vol.96, No.89, pp.107-114 (Nov, 1996).

[3] 0f<j 0lO:, EDCf 1QI': !VKvHx$NL>;l$KCeL\$7$? TV J|Aw Cf$N;zKk$N0UL#B0@-2r@O!W; >pJs=hM}3X2qBh 55 2sA49qBg 2qM=9F=8, Vol.2, pp.91-92 (Sep, 1997).

[4] ;3K\ 98;J, 0f<j 0lO:, EDCf 1QI': !V%K%e!<%91GA|Cf$N %7%g%C%HJ,N`$K4X9k8&5f!W; >pJs=hM}3X2qBh 55 2sA49q 2qM=9F=8, Vol.2, pp.160-161 (Sep, 1997).