1S-8 %^%k%A%a%G%#%"!&%G!<%?%Y!<%9$KMW5a$5lk 2hA|$NIA<L$K4X9k8&5f

0f<j 0lO:, EDCf 1QI'

{ide, tanaka}@mtl.t.u-tokyo.ac.jp

El5~Bg3XBg3X1! 9)3X7O8&5f2J*

1 35MW

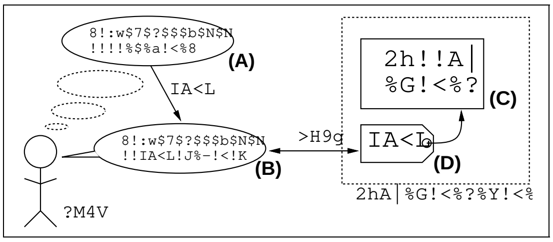
:r:#$N7W;;5!$*hS<~JU5!4o$NHtLvE*$J?JJb$d>pJsDL?.4pHW$N@0HwJIKh$j!"%^%k%A%a%G%#%"!&%G!<%?%Y!<%9 (FC$K2hA|%G!<%?%Y!<%9) $,CmL\$rMaSF$$$k!#MM!9$J8!:w!&@8@.<jK!$,Ds0F5l$F$$$k$,!"2hA|$H$$$&BP>]$rD>@\07$&3H$O:$FqG"$j!"E,@Z$J%-!<$rIU2C$9kN$,8=<BE*$@$H9M$(il$k!#

K\8&5fGO!"?M4VKh$k2hA|$NIA<L$N2r@O$rDL$8!"E,@Z$J%-!<HO$$$+JkbN$+$rLO:w$7!"$=lKhj!"8zN(E*$J8!:w$r<B8=9k%G!<%?%Y!<%9$NE,@Z$J9=C[K!$K4X$9$kCN8+$rF@k3HrL\E*H9$k!#

6qBNE*KO!"IA<L$N3,AX@-$H$$$&35G0$rDs>'$7!"IA<L$NB?MM@-$H$N4XO"$r?4M}<B83rDL7$FD4$Y$k!#

2 8&5f$NF05!

K\8&5f$NF05!$O!"0J2<$K<($9h&$JBgOH$N>e$K@.$j N)CF$$$k!#



?^ 1: 8&5f$NF05!

1. 8!:w$N:]$K$O!"5a$a$k2hA|$N%$%a!<%8 (A) $,$NCf$KB8:_$9$k
2. (A) $r8@MU$GI=8= (=IA<L) $7 (B) !"%G!<%?%Y!<%98!:w$N%-!<H9$k
3. 8!:w7k2L (C) $O!"(A) $K6a$$$[Ih$$
"* %G!<%?%Y!<%9Cf$N2hA|%G!<%?$NIA<L (D) $H (B) $K6a$$$[Ih$$
   "* NI$$ (D) $r@8@.$9k3H,!"NI$$2hA|%G!<%?%Y!<%9$N:n@.$KDJ$,$k
   "* NI$$ (D) $KMW5a$5lk>r7o$O!"(B) $r8&5f$9k3HKhjCN8+$,F@$ilk

!h ?M4VKh$k2hA|$NIA<L$N8&5f$,I,MW

2.1 IA<L

K\8&5fGO!VIA<L!WHO!"2hA|$NFbMF$r<+A38@8l$GI=8=$9k3Hr$$$&!#4pK\E*KO!V[<g8l] $, ([L\E*8l] $r)[=R8l]!W$H$$$&7AKhkbNr9M$($k!#IA<LBP>]$O<g8l$d L\E*8lHJ$k2D;kE*;vJ* (L>;l) $H!"=R8l$KJk2D;kE*F0;n!&>uBVJI (F0;l) HJ$k[1]

2.1.1 IA<L$NB?MM@-

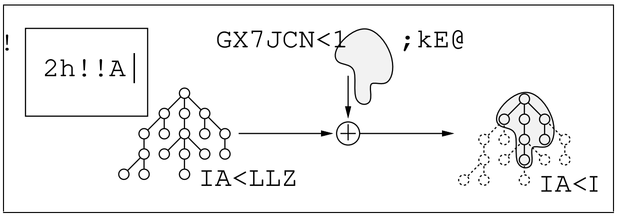
?M4VKh$k2hA|$NIA<L$r9M$($k:]$K$O!"IA<L$NB?MM@-$r9M$(kI,MW,$"$k!#B?MM@-$,@8$8$kM}M3$H7F!"<!$N2$D$,Bg$-$/4X78$9kH;Wol$k!#

- GX7JCN<1 !D 8D?M:9$,Bg$-$$
- Cm;kE@ !D F1$8?M$G$b>u67$KhCFJQo$k

$3$3GOB?MM@-$r<h$j>e2?$,!"6&DL@-$bF1MM$KB8:_$7!"3>O$G9T$J$&?4M}<B83$rDL7F!"N><T$NB8:_$rL@i+K9$k!#6&DL@-$O!"2hA|E*$KL\N)$C$?$j!"FbMFE*$K>W7bE*$G$"$C$?$j9k3HKh$j@8$8kH;Wol$k!#

2.1.2 IA<L$N3,AX@-

M}A[E*KO!"INh&$J2hA|$G$b!"?tB?$/$NIA<L$N=89g$GI=$7?T$/$;kH2>Dj9k!#$^$?!"3F!9$NIA<L$Ohj:Y$+$$IA<L$KJ,2r$G$-$kNG!"3,AX@-rb$D!#$D$^$j!"2hA|$OM}A[E*$K$O3,AX@-$rbDLZ9=B$$KhjIA<LG-kH9M$($i$l!"$3$N9=B$$rIA<LLZ$H8F$V!#3Nh&$J9=B$$r2>Dj9k$H!"?M4V$KhkIA<L$O?^ 2$K<(9h$&$K!"IA<LLZ$N0lIt$r@Z$j=P$7$?$bNH$_$J$;$k!#



?^ 2: IA<L$N3,AX@-$H?M4VKh$kIA<L

3,AX@-$K<!$N2<oNbN$,$"$k!#[2]

- 35G03,AX !D *ex.* <+F0<V"*>hMQ<V"*%+%m!<%i
- ItIJ3,AX !D *ex.* <+F0<V"*<VBN"*%P%s%Q!<

3liOI,$:$7$bFHN)$7$?3,AX9=B$$GOJ$/!"8_$$$KL)@\$K4XO"7F$$$k$,!"0J2<$G$O<g$K8e<T$NItIJ3,AX$K$D$$$F<h$j>e$2$k!#

---

* "Research on Image Descriptions Required for Multimedia Databases"

Ichirō Ide, Hidehiko Tanaka
University of Tokyō, Graduate School of Engineering
7-3-1 Hongō, Bunkyō-ku, Tokyō 113, Japan

[1] $3$3GO8&5f$NBh 1 CJ3,$H7F!";vJ*KD$$$FO@8k

[2] ;vJ*rNcH7F<h$j>e$2k,!"F0:n$K4X$9$k3,AX@-$bF1MMK"$k

3 IA<L$NB?MM@-$H3,AX@-

IA<L$NB?MM@-$OIA<LLZNI$NItJ,$r@Z$j=P$9$+$KhC$F@8$8kH9M$($ilk!#0J2<GO!"GX7JCN<1$HCm;kE@$KhC$F!"@Z$j=P$9ItJ,$,INh&$K0[$Jk+$r?4M}<B83$rDL7F<($9!#

3.1 ?4M}<B83

3.1.1 <B83<j=g

1. Gr9u$N@E;_2hA|$r 15 IC4V8+$;$k
2. 2hA|$r1#$7!"0u>]$K;D$C$F$$$k;vJ*$r 3 $D5s$2Fbi& "* Cm;kE@
3. :F$S2hA|$r8+$;!"2. $G5s$2$? 3 DN;vJ*$K4X7F L"9TDxEY$G4JC1$KIA<L$7Fbi& "* GX7JCN<1$NEY9g
4. 2hA|Cf$NIA<L$KCM9k$H;W$olk;vJ*$r;W$$$D$/$^$^$K5-7Fbi$&[3] "* Ho83<T$NIA<L$7F@$k;vJ*

3.1.2 <B837k2L

0J>e$N<j=g$Khj!"8=;~E@GO 2 Kg$N0[$J$k2hA|[4]$K$D$$$F 11 L>$NHo83<T$N6(NO$rF@$F!"?4M}<B83$r9T$JC?!#

$^$:Ho83<T$, 4. $G5s$2$?!"IA<L$KCM9k;vJ*$r85$K!"IA<LLZ$r:n@.$7$?[5]$#$=$N>e$G!"Cm;kE@!"$5iK$OIA<LLZ$HB?MM@-HN4X78KD$$$F2r@O7?!#

- IA<LLZKD$$$F

IA<L5l$kHO0O$O0lDjNBg-5K<}$^$k$,L"8D?M:9$O$+$Jj"$k!#FC$K!">\:YEY$,$^A^AG$"$k!#I= 1$K 4. $G5s$2il$?;vJ*$NAm?t$r<($9[6]!#

2h	2sEz;vJ*?t (A4It)	2sEz;vJ*?t (<gMW)
1	27	18
2	20	12

I= 1: IA<LLZNBg-$5

- Cm;kE@KD$$$F

2. $N2sEz$r85$K!"Cm;kE@$r2r@O9k!#6&DL@-$,Hs>o$K6/$/!"2hA| 2 GO$[HsIN?M$,F1MM$N2sEz$r7?!#I= 2$KCm;kE@$NIQEY=g$NN_@Q3d9g$r<($9[7]!#

2h	1 0L	2 0L	3 0L	4 0L	6 0L	8 0L
1	24% 8*1	49% 4*2	—	67% 3*2	79% 2*2	100% 1*7
2	33% 11*1	64% 10*1	88% 8*1	100% 1*4	—	—

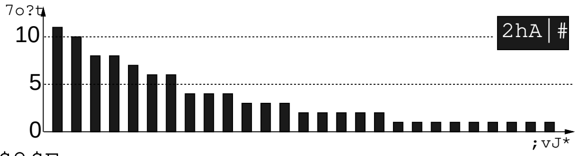
I= 2: Cm;kE@$N6&DL@-

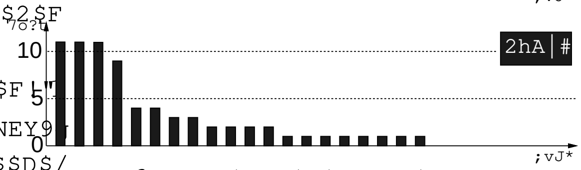
2hA|Cf$N;vJ*$NBg$-$5$d0LCV!"%3%s%H%i%9%H$JI,?':LE*$JLdBj!"4v2?3XE*FCD'$JI,4XO"7F!"$"$kDxEY6&DL$NH?1~$r0z$-5/$3$9$N$@$m$&!#

[3] $3$3$G5s$2Fbi&;vJ*KO 1. $G5s$2$? 3 Dr4^$'
[4] ;fLL$NET9g$JIKhj$3$3KO7G:\$7$J$$
[5] 3,AX9=B$$O2hA|$H2sEz$r;29MK7$FI.<T$,9=C[7?
[6] (<gMW) HO!"1 7o7+5s2ilJ$+$C$?;vJ*$r=|$$$??t
[7] I=$N2<CJ$O (Cm;k7o?t)*(;vJ*?t) $r<($9

- IA<L$NB?MM@-$H6&DL@-

Ho83<TA4BN$NIA<L$KhC$F:n@.$7$?IA<LLZ$KBP7F!"3FHo83<T$NIA<L$r=EMk$H!"?^ 2$GM=A[7?h&$JB?MM@-$,8=l?!#<B:]$K 4. $G2sEz$,$"$C$?;vJ*$NIQEYJ,I[$r?^ 3$K<($9!#





?^ 3: IA<LKCM9$k;vJ*$NIQEYJ,I[

4 7kO@

<B83Kh$j!"Ho83<T$KhkIA<L$,0lDj$NHO0O$K<}$^k3H,<(5l!"2hA|CfN"if$k;vJ*$r5-=R7?M}A[E*$JIA<LLZ$rMQ0U7J$/$H$b==J,$G$"$k3H$,J,$+C?!#7+$7!"35G0E*$K$OF1$8;vJ*$dF0:n$K$D$$$F$b!"MM!9$JIA<L$,2DG=$G$"$j!"$=$lirF10lH_J9$?$a$K!"35G0<-=q$Nh&JbNrMQ$$$kI,MW$,$"j=$&$@!#

Cm;kE@$K4X$7FO!"<B@$3&$G$OF0$/;vJ*$KCm;k$9$k798~$,>l9gKhCF$O6/$$$H$$$&LLGr$$8=>]$,8+$il?$,!"F0$/;vJ*Gb!"?M4V$OHf3SE*Cm;k$5lK$/$$$H$$$&7k2L$b=P$F$*$j!":#8e860x$rC5$j$?$$!#

5 $*$ojK

K\8&5f$O!"8zN(E*$J2hA|%G!<%?%Y!<%9$N9=C[$r9TJ&:]KI,MWHJk4pACE*$J5;=Q$H7F!"2hA|rINh$&$KIA<L9k$+$H$$$&LdBj$r07$C$?!#>-MhE*$K$O!"2hA|%G!<%?$KBP7F!"IA<L$r (H>) <+F0E*$KIU2C9kh&$J5;=Q$,I,MWKJkH;Wolk,!"K\8&5fO=$N:]$KIA<L$KMW5a$5lk>r7o!&HO0O$rL@$+K9k3HK7kSIU/!#

0J>e$K<($7$?$N$O!"=iJbE*$J<B837k2LG"$j!"<B83J}K!$d%G!<%?NLJI!"0MA3ITHw$JE@$d2r@O$,ITB-$7$F$$$kE@$,B?!9$"$k!#$^$?!"2hA|$dGX7JCN<1$NDjNLE*$JI>2A$,$J5l$F$$$J$$$?aK!"3. $N7k2L$HGX7JCN<1$N4X78$K$D$$$F$N2r@O$,G-$F$$$J$$$N$G!":#8eDjNL2=$N<jK!$r9M$(J1lPJi$J$$!#

<gMW;29MJ88%

1.!V2hA|$NFbMF8!:w —EE;RH~=Q4[$X$N1~MQ—!W 2CF# =S01, 7*ED B?4nIW; >pJs=hM} Vol.33, No.5, pp.466-477; May 1992.

2.!V1GA|$NFbMF5-=R%b%G%k$H$=$N1GA|9=B$2=$X$N1~MQ!W <FED @57<; EE;R>pJsDL?.3X2qO@J8;o D-II Vol.J78-D-II, No.5, pp.754-764; March 1995.