2hA|FbMF$N5-=R$K4pE/3,AXE*%-!<%o!<%I$rMQ$$$?
2hA|%G!<%?%Y!<%9%7%9%F%`$NDs0F

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

1 O8aK

:r:#$N5;=Q?JJb$d>pJsDL?.4pHW$N@0Hw$Khj!"%^%k%A%a%G%#%"!&%G!<%?%Y!<%9 (0J2< DB) $,CmL\$5lF$$$k!#2hA|%G!<%?$rD>@\%-!<$H7F07$&<jK!$b8&5f5l$F$$$k$,!"0lHL$K$OE,@Z$J%-!<%o!<%I$rIU2C$9$kJ}$,8=<BE*$H9M$(il$k!#$7$+$7!"%-!<%o!<%I$NIU2C$O8=>uGO?M<jKMjCF*$j!"$=l9$iI,$:7bE,@ZHO$$$($J$$!#

K\8&5fGO!"$^$:?M4VKh$k2hA|$NIA<L$r;29M$K7?!VIA<LLZ%-!<!W$H$$$&3,AXE*%-!<%o!<%I$rDs0F$9$k!#$5iK!">-Mh$N(H>) <+F0E*$J%-!<%o!<%I$NIU2C$rG0F,KCV-!"3Nh&$J%-!<%o!<%I$rMQ$$$Fhj8zN(E*$J8!:w$r<B8=9k$?$a$N2hA| DB $N9=C[K!$rDs0F9k!#

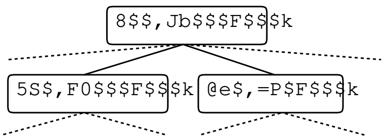
2 2hA|H=$NIA<L

2.1 2hA|$NIA<L

2.1.1 IA<L$NDj5A$HFCD'

?M4V$,2hA|$K1GCF$$$k;v>]$r<+A38@8l$GI=8=9k3H$rIA<L$H8FV3HH9k!#

0lHL$K!"IA<L$O?^ 1$K<($9h&$K!"3,AX9=B$$rbD!#



?^ 1: IA<L$N3,AX@-

Kt!"5f6KE*KO2hA|Cf$NA4$F$N;v>]$rIA<LKh$jI=8=$7?T$/$;kH2>Dj9k!#3N2>Dj$K=>$&$H!"@h=R$N3,AX@-$H9g$o$;$F!"0lDN3,AX9=B$$rbDIA<L$N=89g(={R$9$kIA<LLZ$N5f6K$N7A) $H2hA|$rEy2AH_J;$k!#

2.1.2 ?M4VKh$k2hA|$NIA<L

?M4VKh$k2hA|$NIA<L$O!"EvA32hA|Cf$NA4FN;v>]$rI=8=$9ko1GOJ$/!"3F?M$NGX7JCN<1d=$N;~$N6=L#JIKhCF0[Jj!"?^ 2$N%b%G%k$Nh&$K!"2hA|$HEy2A$JIA<L$N=89g (5f6K$NIA<LLZ) $N0lIt$rCj=P7FI=8=7F$$$k$H9M$(il$k!#

[*] "Proposal of a Database System Based on Hierarchical Keywords Created from Descriptions of Images"
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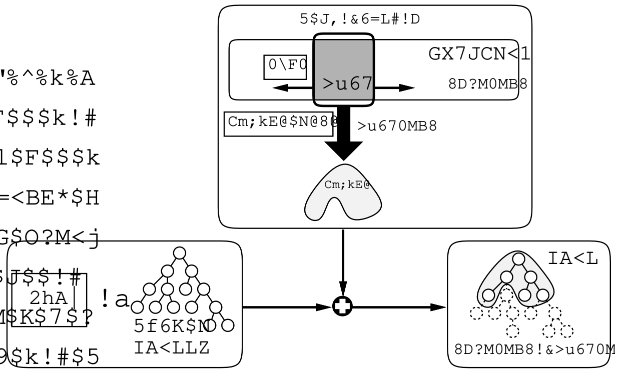


?^ 2: ?M4VKh$k2hA|$NIA<L$N%b%G%k

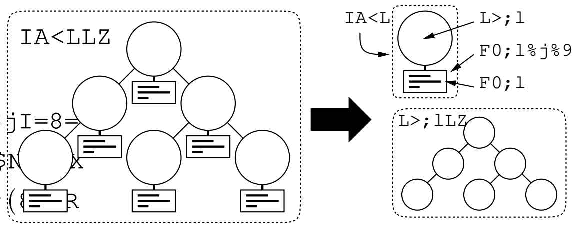
2.2 IA<LLZ

2.2.1 IA<LLZ$NDj5A

2.1 $G=R$Y$?$h$&$J2hA|$HEy2A$JIA<L$N=89g$rF@k3HO!"8=<BKO:FqG$"$j!"2hA| DB $r8!:w$9$k:]$K==J,$JDxEY$NIA<L$N3,AXE*=89g$r!VIA<LLZ!W$H8F$V!#

2.2.2 L>;lLZ$HF0;l%j%9%H

IA<L$NB?MM@-$r5[<}9k$?$a$K!"L>;l$HF0;l$rJL!9$K07$&!#?^ 3$K<(9h$&$K!"L>;l$OIA<LLZ$N3,AX@-$rJ]$D$?$a$K3,AX9=B$$NL>;lLZ$K!"F0;l$OL>;lLZ$N3F%N!<%I$KIU?o9kHs3,AXE*$J9=B$$NF0;l%j%9%HK9$k!#



?^ 3: IA<LLZ$N9=B$

2.2.3 L>;lLZK*1k%N!<%I4V$N4X78

L>;lLZ$N%N!<%I4V$N4X78$r0J2<$N;0DLjKJ,N`9k!#

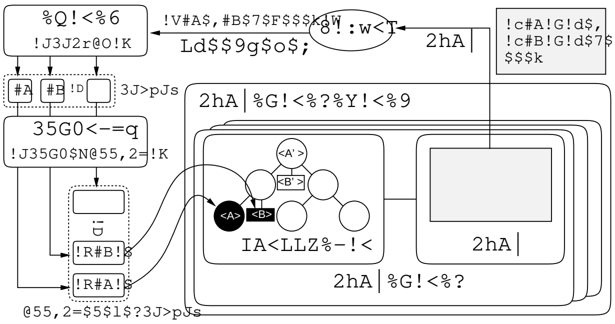
- **is-part-of** 4X78
  ;vJ*$NJ*M}E*$JJq4^4X78
- **is-kind-of** 4X78
  ;vJ*$N35G0E*$JJq4^4X78
- **is-a** 4X78
  J*M}E*!&35G0E*$KF1013,AX$N%N!<%I4V$N4X78

3 IA<LLZ$rMQ$$$?2hA|%G!<%?%Y!<%9

3.1 %7%9%F%`9=@.

2 >O$GDs0F$7$?IA<LLZ$r%-!<%o!<%IH7Fb$D2hA|DB%7%9%F%`$N9=@.$r8!F$$9$k!#

?^ 4$K%7%9%F%`9=@.$N35N,$r<($9!#



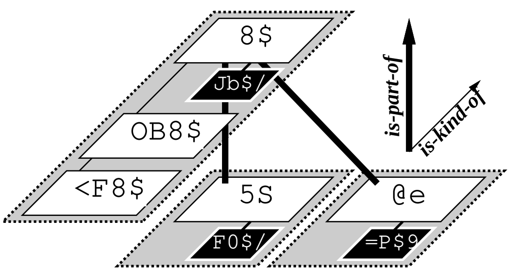
?^ 4: %7%9%F%`9=@.$N35N,

3Nh&$J%7%9%F%`$r<B8=9k$?$aKO0J2<$N,0$D$N=hM}It$,=EMW$JLr3d$r2L$?$9!#

1. <+A38@8l=hM}It
   <+A38@8l%Q!<%6$rMQ$$$F!"3J>pJs$rCj=P$9$k!#K\8&5f$G$O46@->pJs=hM}E*$J=hM}$O9T$o$J$$$N$G!"0J2<$N=hM}GOL>;l$HF0;l$N$_MQ$$$k!#
2. 35G0@55,2==hM}It
   35G0<-=q$rMQ$$$F!"Ld$$9go;$NB?MM@-$r$"$k2r>C$7!"8eCJ$N8!:w=hM}$N:]$KIA<LLZ$H@09g@-$Hlkh&$K!"L>;l$HF0;l$r@55,2=$9$k!#Kt!"is-a 4X78$K$"$k35G0O3$3$G5[<}9k!#
3. 8!:w=hM}It
   @55,2=5l$?Ld$$9go;$H!"DB Cf$N3F2hA|$K!<%$NIA<LLZ%-!<HN>H9g$r9T$&!#<B:]KO!"A0CJ$N35G0@55,2==hM}It$K$U%#!<%I%P%C%/$r$+$1$F!"8!:w$K@.8y9k$^$G!"$"$k$$$OM_$7$$8uJd$,8+IU$+k^$G!"2?EY$+0[JkL>;l$HF0;l$NAH$G>H9g$r9T$&!#

3.2 8!:w=hM}ItK*1k=hM}

8!:w=hM}It$OK\8&5f$N<gBjG"$kIA<LLZ$rMQ$$$?=hM}ItJN$G!"<c43>\$7$/5-$9!#



?^ 5: IA<LLZ%-!<$NNc

3.2.1 IA<LLZ%-!<$N9=@.

IA<LLZ%-!<$O?^ 5$KNc<(9kh&$K!"is-part-of 4X78$H is-kind-of 4X78$r6hJL$7$F07$&!#3l$O!"**3.2.2** $G<($98!:w5,B'$r<B8=$9k?aG$"$k!#

3.2.2 IA<LLZ%-!<$rMxMQ$7$?8!:wK!

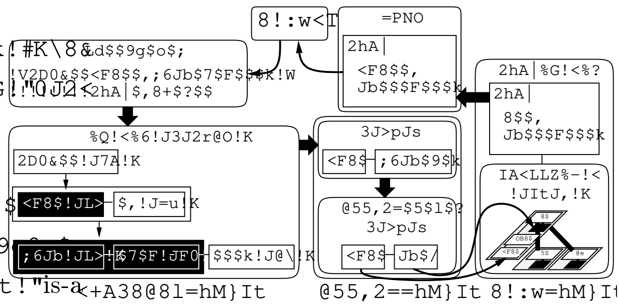
0J2<$N5,B'$NbH$K@55,2=$5l?Ld$$9go;$HIA<LLZ%-!<Cf$NL>;l$HF0;l$N>H9g$r9T$$!"8!:w$r9T$&!#

1. @55,2=5l$?L>;l$H0lCW9kL>;lLZCf$NL>;l$rC5$9
2. @55,2=5l$?F0;l$H0lCW9k!"1. $GH/8+$7$?L>;l$*hS$=$NL>;l$HL>;lLZCf$G is-kind-of 4X78K"$kL>;l$KIU?o9kF0;l%j%9%HCf$NF0;l$rC5$9

<B:]O3$N=hM}$G8!:w$,@.8y$9$kJ]>Z$OJ/!"<:GT7?H-$d99$K8uJd$,M_$7$$$H$-$O:F$SA0CJ$N@55,2==hM}ItKLaj!"?7$?$JL>;l$HF0;l$NAHKh$k8!:w$r9T$&!#

3.3 8!:wNc

?^ 6$K6qBNE*$J8!:wNc$r<($9!#



?^ 6: 8!:w$N6qBNNc

4 $*$ojK

0J>eGO!"IA<LLZ%-!<$H$$$&7ABV$N%-!<%o!<%I$rDs0F$7!"$=lrMQ$$$?2hA|DB%7%9%F%`$K4X$7$F8!F$$7$?!#:#8e$O2hA|%G!<%?$+$i$$$+$KO+NO$r$+$1$:$KIA<LLZ$r@8@.$9$k$+$d!"DB%7%9%F%`$r<B:]$K9=C[9k:]KI,MWJ=hM}$K4X$7$F99$K5MakI,MW$,$"$k!#$^$?!">-MhF02hA|$r07$&:]$K$O;~4V$N35G0$bF3F~$9kI,MW,$"$j!";~4V<4>e$GIA<LLZ$rINh&$KI=8=$9k+$b2]Bj$G$"$k!#

<gMW;29MJ88%

1. !V1GA|$NFbMF5-=R%b%G%k$H$=$N1GA|9=B$2=$X$N1~MQ!W; <FED@57<; EE;R>pJsDL?.3X2qO@J8;o D-II Vol.J78-D-II No.5 pp.754-764, May 1995.
2. !V?"J*?^4U$N%F%-%9%H$H?^Kh$k?"J*MQ8l4V$N3,AX4X78$N3MF@!W; EOJULwI', D9Hx??; >pJs=hM}3X2q8&5fJs9p Vol.95 No.69 95-NL-108 pp.21-28, July 1995.
3. !V%^%k%A%a%G%#%"!&%G!<%?%Y!<%9$KMW5a$5lk2hA|$NIA<L$K4X9k8&5f!W; 0f<j0lO:, EDCf1QI'; >pJs=hM}3X2qBh 51 2sA49qBg2q9V1iO@J8=8 (3) pp.303-304, September 1995.