

2 MetaCommander Scripts

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1: set( url, "http://www.genome.ad.jp/htbin/www_bfind_sub" ) /* URL of Genome Net */
2: set( dbkey, "genbank" ) /* database name */
3: set( mode, "bfind" ) /* data retrieve method */
4: set( max_hit, 10 ) /* max number of data hits */
5: set( keywords, "hiv human mRNA" ) /* search keywords */

6: getURL( $url, "dbkey"=$dbkey,"keywords"=$keywords, "mode"=$mode,
  "max_hit"=$max_hit) { /* get access to genbank with parameters *
7:   getAnchor($max_hit) { /* get each of hyperlinks from index page */
8:     print /* print the hyperlink */
9:     tag("BR") /* break the line */
10:    getURL($_) { /* follow the hyperlink and retrieve the page */
11:      cutString("REFERENCE","FEATURES") {
12:        /* cut data between REFERENCE and FEATURES */
13:        tag("PRE") { /* print the data as a plain text */
14:          print }}}}}
```

Figure 2: An example of script.

Figure 2 shows an example of MetaCommander script. This script is for collecting reference data concerning keywords “hiv human mRNA” from GenBank and integrating them as an HTML text. We have made a number of MetaCommander scripts for supporting genome data processing as follows, and some of them are available through the script library of our MetaCommander homepage.

- Automating parameter inputting for BLAST¹, GDB Insert Amplimer², Grail³, and Hexon⁴.
- Integrating reference data from GenBank⁵ and abstracts from Medline⁶.
- Integrating Grail³ and Hexon⁴ for better gene prediction.
- Extracting updated data from Genbank-upd⁷ into a personalized database.

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References

- [1] Y. Kitamura, et al., “MetaViewer and MetaCommander: Applying WWW Tools to Genome Informatics,” Proceedings of the Seventh Workshop on Genome Informatics, 137-146, 1996.
- [2] Y. Kitamura, et al., “A Script-based WWW Information Integration Support System and Its Application to Genome Databases,” Proceedings of IEICE Symposium on Software Agents and Their Applications, 87-92, 1997.

¹<http://www.genome.ad.jp/SIT/BLAST.html>

²<http://gdbwww.gdb.org/gdb-bin/genera/restrict/genera/hgd/Amplimer?action=insertform>

³<http://avalon.epm.ornl.gov/Grail-bin/EmptyGrailForm>

⁴<http://dot.imgen.bcm.tmc.edu:9331/gene-finder/gf.html>

⁵http://www.genome.ad.jp/htbin/www_bfind?genbank-today

⁶http://www.genome.ad.jp/dbget-bin/www_bfind?medline

⁷http://www.genome.ad.jp/htbin/www_bfind?genbank-upd