Department of Computer Sciences Purdue University West Lafayette, IN 47907 May 31, 2001

Three "Most Wanted" numbers and one "More Wanted" number were factored on Page 86, all by the Number Field Sieve. From the wanted lists in Update 2.E, mailed on July 20, 2000, Bob Silverman and CWI factored the "Most Wanted" numbers 6,256+ and 2,617+. CWI factored the "Most Wanted" number 3,379- and the "More Wanted" number 6,242+.

New wanted lists are enclosed (on the back of the Champion page). No new numbers were added to the lists of Update 2.E, but several "More Wanted" numbers were promoted to "Most Wanted." There will be longer new lists in the third edition, which should be published soon. There is also a "Smaller but Needed" list on the back of the Champion page.

CWI means Henk Boender, Stefania Cavallar, Walter Lioen, Peter Montgomery, Herman te Riele and Dik Winter at the Centrum voor Wiskunde en Informatica in Amsterdam. ECMNET means Paul Zimmermann, Torbjörn Granlund, Michel Quercia, Witold Grabysz, Vilmar Trevisan and many helpers who use Granlund's GMP-ECM program.

There were no new champions for factoring Cunningham numbers on this page. Recall that a champion is one of the best two records in its class.

The first holes done on Page 86 are in # 4621 and # 4623. No second or third holes were done on Page 86. The only fourth hole done on Page 86 is in # 4616. The only fifth hole done on Page 86 is in # 4618.

The smallest new factor reported on Page 86 has 37 digits. See # 4608. The largest number factored on Page 86 has 269 digits. See # 4625.

See the URL http://www.prothsearch.net/fermat.html for Wilfrid Keller's list of all known Fermat factors.

See the URL http://www.utm.edu/research/primes/largest.html for Chris Caldwell's list of all of the largest known Mersenne primes.

If your address changes, please tell me.

Keep the factors coming!

Sam Wagstaff