CoCoALib - Feature #127

Convert DUPFF code to C++

05 Apr 2012 14:27 - John Abbott

Status:	In Progress	**Start date:**	05 Apr 2012
Priority:	Normal	**Due date:**	
Assignee:	John Abbott	**% Done:**	50%
Category:	New Function	**Estimated time:**	25.00 hours
Target version:	CoCoALib-1.0	**Spent time:**	22.20 hours

Description
Convert the old factorizer C code "DUPFF" into C++.

Related issues:		
Related to CoCoALib - Feature #126: New datastructures directory	**New**	**05 Apr 2012**
Related to CoCoALib - Slug #129: Better GCD	**New**	**15 Apr 2012**
Related to CoCoALib - Bug #135: Revise interface to SmallFpImpl & friends	**Closed**	**20 Apr 2012**
Related to CoCoALib - Slug #952: GCD very slow	**Closed**	**25 Oct 2016**
Related to CoCoALib - Feature #257: Transcribe C4 code for GCD in QQ[x]	**New**	**09 Oct 2012**
Related to CoCoALib - Feature #718: Insert calls to CheckForInterrupt	**Closed**	**21 May 2015**

History

#1 - 19 Apr 2012 12:10 - John Abbott

- *Estimated time set to 25.00 h*

#2 - 22 Nov 2012 15:00 - John Abbott

- *Status changed from New to In Progress*

- *% Done changed from 0 to 20*

JAA has written a first prototype.

It works, but is 10% slower than the old C code for multiplication - why???

#3 - 20 Mar 2013 23:22 - John Abbott

- *Category set to New Function*

- *Assignee set to John Abbott*

- *Target version set to CoCoALib-0.99534 Seoul14*

- *% Done changed from 20 to 50*

I've rewritten most of the DUPFF code in C++ (*i.e.* using DUPFp).

Still need to do:

1. CVS check-in (**done 2013-03-25**)
2. complete impl of power
3. correctness testing; write test suite
4. speed testing against old DUPFF code
5. write documentation (from scratch)
6. implement factorization (both Berlekamp and Cantor-Zassenhaus).

#4 - 29 Oct 2013 15:16 - Anna Maria Bigatti

- Target version changed from CoCoALib-0.99534 Seoul14 to CoCoALib-0.99532

#5 - 02 Apr 2014 16:58 - John Abbott

- Target version changed from CoCoALib-0.99532 to CoCoALib-0.99533 Easter14

#6 - 04 Apr 2014 17:14 - John Abbott

- Target version changed from CoCoALib-0.99533 Easter14 to CoCoALib-0.99534 Seoul14

#7 - 10 Jul 2014 14:18 - John Abbott

- Target version changed from CoCoALib-0.99534 Seoul14 to CoCoALib-1.0

#8 - 25 Oct 2016 23:04 - John Abbott

- Related to Slug #952: GCD very slow added

#9 - 24 Nov 2016 13:23 - John Abbott

- Related to Feature #257: Transcribe C4 code for GCD in QQ[x] added

#10 - 28 Sep 2022 15:04 - John Abbott

Upon rewriting, make sure that calls to CheckForInterrupt are inserted. (see comment 11 of issue [#718](#))

#11 - 28 Sep 2022 15:04 - John Abbott

- Related to Feature #718: Insert calls to CheckForInterrupt added