CoCoALib - Feature #47

Feature # 39 (Closed): Squarefree factorization

Feature # 43 (Closed): Squarefree factorization - for polynomials

Squarefree factorization - multivariate polynomials

30 Nov 2011 17:28 - John Abbott

Status:	Closed	Start date:	30 Nov 2011		
Priority:	Normal	Due date:			
Assignee:	John Abbott	% Done:	100%		
Category:	New Function	Estimated time:	0.00 hour		
Target version:	CoCoALib-0.99532	Spent time:	4.45 hours		
Description					
A bit tricker than univariate. Seems to need content-free factorization.					
Subtasks:					
Feature # 48: Squarefree factorization - multivariate polynomials, char 0					Closed
Feature # 49: Squarefree factorization - multivariate polynomials, char p > 0					Closed
Related issues:					
Related to CoCoALib - Feature #40: Squarefree factorization - Alessio d'Ali`			Closed	30 Nov 2011	
Related to CoCoALib - Feature #515: Fn to "flatten" muliple polynomial extns			New	02 Apr 2014	
Related to CoCoALib - Feature #796: CoCoALib function for radical (or SqFree)			Closed	05 Nov 2015	
Precedes CoCoALib - Feature #516: Make squarefreefactor work in multiple poly			New	02 Apr 2014	

History

#1 - 20 Oct 2013 14:49 - John Abbott

- Status changed from New to In Progress

- Assignee set to John Abbott

JAA is translating Alessio D'Ali's impl (in CoCoA5) into C++.

Most of the translation is complete, but it does not yet compile (even less pass the tests).

#2 - 23 Oct 2013 15:32 - John Abbott

Translation of d'Ali's impl is now complete. Code has been checked in; incl doc and tests.

Some minor points remain outstanding (regarding execution speed and/or working in unusual rings); I've decided to ignore them for the time being.

Here are some "unusual" rings we should eventually handle:

- QQ[x][y,z]
- QQ(x)[y,z] -- this should already work (if GCD works)
- ZZ/(p)[x][y,z]
- FrF(ZZ/(p)[x])[y,z] -- this already works, I believe

#3 - 29 Oct 2013 13:06 - Anna Maria Bigatti

#4 - 02 Apr 2014 18:57 - John Abbott

- Status changed from In Progress to Closed

For many practical purposes this issue is complete. True completion now depends on <u>#515</u>, so I shall close this, and add a new issue (to complete sqfr once 515 has been done).