

CoCoA-5 - Slug #1578

SLUG: RationalSolve slow and stupid

22 Feb 2021 15:22 - John Abbott

Status:	New	Start date:	22 Feb 2021
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	enhancing/improving	Estimated time:	0.00 hour
Target version:	CoCoA-5.4.4	Spent time:	0.30 hour
<div>Description</div> <p>The following system can easily be solved by hand, but CoCoA is very slow</p> <div>[x*y +y^2, x^2 -z^2, y^3 -y*z^2, z^2021 -1]</div> <p>The problem seems to be computing the minpoly of x, but it would better to start with z since we already have a univariate poly in z.</p>			

History

#1 - 23 Feb 2021 10:39 - John Abbott

- Description updated

Some ideas:

- if there is a univariate poly, factorize it, and take just the univariate factors; use these to elim an indet.
- if there is a subset of K polys involving just K indets, and these polys define a 0-dim system, then perhaps solve that sub-problem first?

Requires revising RationalSolve.cpkg5; or maybe port everything into C++?

#2 - 15 Jan 2024 19:27 - John Abbott

- Target version changed from CoCoA-5.4.2 to CoCoA-5.4.4