

CoCoALib - Feature #1513

Better test for univariate-ness (and better conversion)

19 Oct 2020 14:48 - John Abbott

Status:	New	Start date:	19 Oct 2020
Priority:	Normal	Due date:	
Assignee:		% Done:	0%
Category:	Improving	Estimated time:	0.00 hour
Target version:	CoCoALib-0.99880	Spent time:	0.30 hour
<b>Description</b> Issue <a href="#">#1118</a> exhibits a slug due to "stupid" conversion from a sparse multivariate poly to a dense univariate poly.  Make a better test for univariate-ness, and a better conversion. The idea is that if a poly is of the form $f(x,y,z) = x^e \cdot g(x^d)$ then the univariate-ness test produces also the exponents $d$ and $e$ (and then conversion to DUP can take these values to make a more compact DUP image).  This should solve <a href="#">#1118</a> , and perhaps also make cyclotomic faster(?)			
<b>Related issues:</b> Related to CoCoALib - Slug #1118: SLUG: factorization of $x^{9999}$ <div>In Progress08 Nov 2017</div>			

History

#1 - 19 Oct 2020 14:48 - John Abbott

- Related to Slug #1118: SLUG: factorization of  $x^{9999}$  added

#2 - 16 Feb 2024 21:31 - John Abbott

Assuming we do implement this, what should its UI be?  
Do we already have a function which converts from SparsePolyRing elem to DenseUPolyRing elem?  
Do we also do simultaneous conversion of coefficients? e.g. from QQ to ZZ (assuming all denoms are 1)?

#3 - 16 Mar 2024 21:38 - John Abbott

- Target version changed from CoCoALib-0.99850 to CoCoALib-0.99880