

CoCoA-5 - Bug #132

BringIn should allow reduction modulo p

17 Apr 2012 21:10 - John Abbott

Status:	Closed	Start date:	17 Apr 2012
Priority:	Normal	Due date:	
Assignee:	Anna Maria Bigatti	% Done:	100%
Category:	CoCoA-4 function to be added	Estimated time:	2.00 hours
Target version:	CoCoA-5.1.1 Seoul14	Spent time:	1.25 hour
Description Currently BringIn does not allow one to move from char 0 to char non-zero. <pre>Use QQ[x]; f := x^2+1; Use ZZ/(5)[x]; BringIn(f); --> gives error</pre> Moreover the error message is misleading.			
Related issues: Related to CoCoA-5 - Bug #100: BringIn should map only the indets in its arg Related to CoCoA-5 - Feature #7: Automatic mapping between (some) rings			
		New	07 Mar 2012
		Resolved	20 Oct 2011

History

#1 - 23 Jan 2013 12:32 - Anna Maria Bigatti
- Category set to CoCoA-4 function to be added

#2 - 31 Mar 2014 11:26 - John Abbott
Even worse: BringIn fails to construct the hom from $\mathbb{Z}\mathbb{Z}/(11)[x,y,z]$ to $\mathbb{Z}\mathbb{Z}/(11)[x,y,z],\text{Lex}$

This is embarrassing!

Ahhhh! Perhaps the problem was that I created $\mathbb{Z}\mathbb{Z}/(11)$ twice, and currently they are not regarded as identical.

#3 - 01 Apr 2014 13:21 - John Abbott
- Status changed from New to In Progress

The example given in the C5 online manual **fails** (because it uses reduction mod p).

#4 - 02 Apr 2014 17:34 - Anna Maria Bigatti
- Target version set to CoCoA-5.1.0 Easter14

#5 - 09 Apr 2014 14:56 - John Abbott
- Target version changed from CoCoA-5.1.0 Easter14 to CoCoA-5.1.1 Seoul14

#6 - 22 Jul 2014 09:19 - Anna Maria Bigatti
- Assignee set to Anna Maria Bigatti
- % Done changed from 0 to 50

now works in some cases, e.g. the one in the description ;-)

More precisely it works if the coefficient ring (of the object to move) is a polynomial ring with coefficients in \mathbb{Z} or \mathbb{Q} .

A bit of a workaround, but that's what BringIn is by its very own nature.

In general it is not guaranteed to work on more complicated ring structures, but in that case I would expect such a user would define a proper RINGHOM.

#7 - 04 Sep 2014 12:05 - John Abbott

- *Status changed from In Progress to Closed*

- *% Done changed from 50 to 100*

Closing even though it only partly resolves the problems with BringIn. I'll create a new, more precise issue.