

CoCoA-5 - Feature #1461

Automatic mapping for multiplication?

10 Jun 2020 16:06 - Anna Maria Bigatti

Status:	Closed	Start date:	10 Jun 2020
Priority:	Normal	Due date:	
Assignee:	Anna Maria Bigatti	% Done:	100%
Category:	enhancing/improving	Estimated time:	3.66 hours
Target version:	CoCoA-5.4.0	Spent time:	3.70 hours
Description			
Related issues:			
Related to CoCoA-5 - Design #635: Automatic mapping of RingElem (in operation...		Closed	22 Oct 2014
Related to CoCoALib - Feature #645: Automatic mapping of RingElem: user selec...		Rejected	04 Nov 2014
Related to CoCoA-5 - Design #637: Undesirable consequence of automatic mappin...		Closed	23 Oct 2014
Related to CoCoA-5 - Feature #7: Automatic mapping between (some) rings		Resolved	20 Oct 2011
Related to CoCoALib - Design #1414: Make class RingElemVector?		In Progress	12 Feb 2020

History

#1 - 10 Jun 2020 16:07 - Anna Maria Bigatti

- Related to Design #635: Automatic mapping of RingElem (in operation with a compound value) added

#2 - 10 Jun 2020 16:07 - Anna Maria Bigatti

- Related to Feature #645: Automatic mapping of RingElem: user selectable at run-time (GlobalManager?) added

#3 - 10 Jun 2020 16:07 - Anna Maria Bigatti

- Related to Design #637: Undesirable consequence of automatic mapping of RingElements? added

#4 - 10 Jun 2020 16:17 - Anna Maria Bigatti

- Category set to enhancing/improving

- Target version set to CoCoA-5.4.0

- % Done changed from 0 to 20

- Estimated time set to 10.00 h

Talking with John, getting bored in the hospital ;-)
first implementation

#5 - 10 Jun 2020 16:20 - Anna Maria Bigatti

use try/catch for better error message?

direct use of myMulByCoeff for efficiency? Is it worth it? (John guesses not)

#6 - 20 Jun 2020 21:34 - John Abbott

- Related to Feature #7: Automatic mapping between (some) rings added

#7 - 20 Jun 2020 21:36 - John Abbott

- Status changed from New to Resolved

- % Done changed from 20 to 50

I have revised Anna's impl (from a joint design over the phone).

In fact we now have the four arith ops with auto conversion.

I have also done:

- MatrixOps.C
- MatrixOps-KroneckerProd.C
- module.C (mostly)

#8 - 22 Jun 2020 17:59 - John Abbott

Here are some more places where **ERR::MixedRings** appears in the source -- which of these should be changed?

- **DenseMat**: myRowMul, myColMul, myAddRowMul, myAddColMul
- FieldIdeal -- needs vector of RingElem in same ring
- **ideal.C** many, some need vector of RingElem in same ring
- **Matrix.C** for SetEntry, also lamEqual
- **MatrixSpecial.C** for JacobianMat which needs vector of RingElem in same ring
- **MatrixView** many cases, some need vector of RingElem in same ring
- PolyFamilies for DicksonPoly
- **ring.C** for operator+= and so on
- **RingElemOps-CoprimeFactorBasis** needs vector RingElem from same ring.
- **SparsePolyOps-XXX** many

#9 - 22 Jun 2020 18:00 - John Abbott

- Related to Design #1414: Make class RingElemVector? added

#10 - 22 Oct 2020 17:10 - John Abbott

I suggest closing this issue, and copying any unresolved parts into issue [#7](#).

It would be nice to have issue [#7](#) as the central point for matters relating to "automatic ringelem conversion".

#11 - 27 Oct 2020 19:08 - John Abbott

- Status changed from Resolved to Closed

- % Done changed from 50 to 100

- Estimated time changed from 10.00 h to 3.66 h

As suggested in comment 10 above, I have copied the "done list" and the "todo list" to issue [#7](#).

Closing this issue -- the main part has been implemented.