# CoCoALib - Design #871

## Redesign ideals

26 Apr 2016 15:01 - John Abbott

Status:	New	Start date:	26 Apr 2016	
Priority:	Normal	Due date:		
Assignee:		% Done:	0%	
Category:	Data Structures	Estimated time:	0.00 hour	
Target version:	CoCoALib-0.99880	Spent time:	0.00 hour	

## **Description**

Review the design of ideals.

Some points to bear in mind:

- an ideal should probably be immutable -- any operation which would "change" the ideal should actually produce a new ideal
- while the main ideals are those in poly rings, I'd like the design to work also for ideals in ZZ (at least).

#### Related issues:

Related to CoCoALib - Bug #130: Design problem in ideals	New	15 Apr 2012
Related to CoCoA-5 - Bug #870: GBasis of product of ideals is wrong (Vadim Tr	Closed	26 Apr 2016
Related to CoCoALib - Feature #665: Integrate Janet/Pommaret basis code	In Progress	11 Feb 2015
Related to CoCoALib - Design #550: add myResolution member field to ideal an	New	09 May 2014
Related to CoCoALib - Feature #520: Compute inverse in quotient ring (i.e. di	Closed	04 Apr 2014
Related to CoCoALib - Design #513: Quick/correct flag for bool3 fns	In Progress	02 Apr 2014
Related to CoCoALib - Design #455: Which sets of generators in an ideal?	New	03 Mar 2014
Related to CoCoALib - Feature #400: add myJBMill member field to ideal	New	02 Aug 2013
Related to CoCoALib - Feature #399: add myHilbertSeries member field to ideal	New	02 Aug 2013
Related to CoCoALib - Design #316: submodule constructor different from ideal	In Progress	20 Feb 2013
Related to CoCoALib - Design #297: Modules design: brainstorming	In Progress	25 Jan 2013
Related to CoCoALib - Slug #120: LT over QQ: surprisingly slow	New	03 Apr 2012
Related to CoCoALib - Bug #114: Ideals of polynomials	In Progress	26 Mar 2012
Related to CoCoALib - Design #1767: Finalize design for ideals in CoCoALib	In Progress	31 Oct 2023

## History

## #1 - 26 Apr 2016 15:01 - John Abbott

- Related to Bug #130: Design problem in ideals added

## #2 - 26 Apr 2016 15:08 - John Abbott

- Related to Bug #870: GBasis of product of ideals is wrong (Vadim Tropashko) --> I.myReset() added

## #3 - 26 Apr 2016 15:08 - John Abbott

- Related to Feature #665: Integrate Janet/Pommaret basis code added

## #4 - 26 Apr 2016 15:09 - John Abbott

- Related to Design #550: add myResolution member field to ideal and (sub)module added

#### #5 - 26 Apr 2016 15:10 - John Abbott

- Related to Feature #520: Compute inverse in quotient ring (i.e. division in algebraic extn) added

#### #6 - 26 Apr 2016 15:10 - John Abbott

- Related to Design #513: Quick/correct flag for bool3 fns added

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#### #7 - 26 Apr 2016 15:10 - John Abbott

- Related to Design #455: Which sets of generators in an ideal? added

#### #8 - 26 Apr 2016 15:11 - John Abbott

- Related to Feature #400: add myJBMill member field to ideal added

## #9 - 26 Apr 2016 15:11 - John Abbott

- Related to Feature #399: add myHilbertSeries member field to ideal and (sub)module added

#### #10 - 26 Apr 2016 15:11 - John Abbott

- Related to Design #316: submodule constructor different from ideal added

#### #11 - 26 Apr 2016 15:11 - John Abbott

- Related to Design #297: Modules design: brainstorming added

#### #12 - 26 Apr 2016 15:13 - John Abbott

- Related to Slug #120: LT over QQ: surprisingly slow added

#### #13 - 26 Apr 2016 15:13 - John Abbott

- Related to Bug #114: Ideals of polynomials added

#### #14 - 22 May 2017 14:11 - Anna Maria Bigatti

- Target version set to CoCoALib-1.0

#### #15 - 31 Oct 2023 11:19 - Anna Maria Bigatti

- Related to Design #1767: Finalize design for ideals in CoCoALib added

#### #16 - 31 Oct 2023 11:23 - Anna Maria Bigatti

Original issue about the design of the ideal class: here we collect the many aspects we should consider for the final design.

#### #17 - 31 Oct 2023 11:24 - Anna Maria Bigatti

- Category set to Data Structures
- Target version changed from CoCoALib-1.0 to CoCoALib-0.99880

## #18 - 31 Oct 2023 11:24 - Anna Maria Bigatti

- Description updated

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