

#2 - 12 Mar 2024 20:39 - John Abbott

- Status changed from New to In Progress

The documentation says that if the grading-dim is not specified then it is taken to be 0. Perhaps this is misleading default behaviour? Maybe the default should be the number of rows? [do we require the rows to be in lin indep?]

#3 - 12 Mar 2024 20:40 - John Abbott

- Description updated

#4 - 13 Mar 2024 20:47 - John Abbott

- Related to Support #1761: MakeTermOrdMat: improve error mesg added

#5 - 13 Mar 2024 20:48 - John Abbott

- Related to Design #832: Generalize grading matrix added

#6 - 14 Mar 2024 08:55 - Anna Maria Bigatti

- Related to Feature #823: NewPolyRing with weights -- better interface? added

#7 - 14 Mar 2024 09:51 - Anna Maria Bigatti

John Abbott wrote:

The documentation says that if the grading-dim is not specified then it is taken to be 0. Perhaps this is misleading default behaviour? Maybe the default should be the number of rows? [do we require the rows to be in lin indep?]

I cannot find the documentation. But it does take the number of rows.
The implementation in SparsePolyRing.C

```
SparsePolyRing NewPolyRing(const ring& CoeffRing, const std::vector<symbol>& IndetSyms, ConstMatrixView Ws)
```

does the trivial thing (calling MakeTermOrdMat(Ws)) and no specific checks whatsoever.

We had suggested, in [#823](#), to call such function NewPolyRingWeights (or NewPolyRingWithWeights), and now I do think we should, because calling NewPolyRing with a square matrix (say, LexMat(n)) would give GradingDim=n, and I think that is unexpected.

#8 - 14 Mar 2024 10:12 - Anna Maria Bigatti

- Description updated

John Abbott wrote:

[do we require the rows to be in lin indep?]

yes

#9 - 14 Mar 2024 12:04 - Anna Maria Bigatti

- % Done changed from 20 to 60

Added check in the definition of `NewPolyRing(K, X, WeightsMat)`.
Should I rename it `NewPolyRingWeights`? (not yet documented, I believe)

#10 - 15 Mar 2024 15:37 - Anna Maria Bigatti

- Description updated

- Status changed from *In Progress* to *Resolved*

- % Done changed from 60 to 80

Anna Maria Bigatti wrote:

Added check in the definition of `NewPolyRing(K, X, WeightsMat)`.
Should I rename it `NewPolyRingWeights`? (not yet documented, I believe)

Yes, I called it **NewPolyRingWeights** to emphasize its meaning.
Also in `CoCoA-5`.

Document in `CoCoALib` and `CoCoA-5`, then close this issue.

#11 - 18 Mar 2024 16:15 - Anna Maria Bigatti

- Status changed from *Resolved* to *Closed*

- % Done changed from 80 to 100