CoCoA-5 - Slug #1638

MinSubsetOfGens sometimes very slow

06 Dec 2021 20:35 - John Abbott

Status:	New		Start date:	06 Dec 2021
Priority:	Normal		Due date:	
Assignee:			% Done:	0%
Category:	enhancing/improving		Estimated time:	0.00 hour
Target version:	CoCoA-5.4.2		Spent time:	0.20 hour

Description

I have just tried MinSubsetOfGens, and was surprised how slow it was on a small example.

```
use QQ[x,y,z];
L := [5*x*z^3 -3*z^4 +4*z -1,  -4*x^3*z +4*y*z^3 -2*y^3 -x*z];
RGB := ReducedGBasis(ideal(L)); --> contains 8 elems
I := ideal(RGB);
MinSubsetOfGens(I); -- 1000+seconds
```

Related issues:

Related to CoCoA-5 - Bug #1640: MinSubsetOfGens does not find min subset	**Closed**	**08 Dec 2021**

History

#1 - 06 Dec 2021 20:37 - John Abbott

There are only 256 subsets to try; and some can be quickly eliminated.
I saw the source, and understand that it is not designed to be fast... but I had not expected it to be so slow!

Maybe some simpler "slug" examples will surface.

#2 - 10 Dec 2021 15:16 - John Abbott

- Related to Bug #1640: MinSubsetOfGens does not find min subset added