CoCoA-5 - Feature #876

subst: allowed also for indets in the coeff ring

07 May 2016 13:57 - John Abbott

Status:	New		Start date:	07 May 2016
Priority:	Normal		Due date:	
Assignee:			% Done:	0%
Category:	enhancing/improving		Estimated time:	0.00 hour
Target version:	CoCoA-5.?.?		Spent time:	0.40 hour

Description
Suppose we have a poly ring of the form QQ(a,b)[x,y] and I want to substitute b=a+1. Currently subst refuses because b is not an indet of the ring. Working around this is very cumbersome.

History

#1 - 07 May 2016 13:59 - John Abbott

Here is an example I was trying with Sandro Logar

```
QQa1 ::= QQ[a[1..6], alpha, beta];
QQa := NewFractionField(QQa1);
P ::= QQa[x,y,z], lex;
use P;

conica := ScalarProduct(support((x+y+z)^2), [a[i] | i in 1..6]);

cond1 := subst(conica, [[x,0], [y, 0], [z, 1]]);

--a6 := num(LC(a[6]));

-- GIVES ERROR !conica1 := subst(conica, a[6], 0);
conica1 := sum(first(monomials(conica), 5));

retta := alpha*x + beta*y;
retta;

I := ideal(conica1, retta);
RGB := ReducedGBasis(I);
indent(RGB);
```