

## CoCoALib - Feature #869

### SmallFpImpl: different repr for computation and for storage?

22 Apr 2016 15:14 - John Abbott

<b>Status:</b>	New	<b>Start date:</b>	22 Apr 2016
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>		<b>% Done:</b>	0%
<b>Category:</b>	Improving	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	CoCoALib-1.0	<b>Spent time:</b>	0.00 hour

#### Description

I would like to use unsigned short to store SmallFp values, but still have a decent range *i.e.* without the restriction that the square of the modulus fit in the "store representation".

I want to do a big computation (needs more than 8Gbytes, and coeffs are modulo some prime with at most 15 bits); currently the coeff values are stored as unsigned int (presumably 4bytes) when presumably they could be fitted into unsigned short... though I'm not actually sure that DistrMPolyInIFpPP can actually make use of this (depends on alignment inside a structure).

Might it make sense to use two different reprs for (external) storage of SmallFp values, and for (internal) computation with those values?