Re: sparse polynomial arithmetic

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- *From*: Roman Pearce <rpearcea@xxxxxxxxx>
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On Apr 3, 11:04 pm, pari...@xxxxxxxxxxxxxx wrote:

> I don't think sparness is the main problem, but memory
> certainly is
> (512M RAM is not enough).

> I disagree. Many approaches work fine on dense problems but suffer or
> die on sparse problems.

> You misunderstood, my point was about giac implementation. Giac
> algorithm for multivariate polynomials is a mix of sparse and dense
> algorithm. It is dense with respect to the first variable and sparse
> with respect to other variables. For each degree of the first variable,
> a thread is launched to compute the corresponding coefficient, each
> coefficient being computed using sparse polynomial multiplication
> (and a hash_map for sorting). Therefore giac * can benefit from
> multiple processors.

Now THAT is interesting. I thought you just used one big hash table.
How well does your parallel code perform ? You really need to buy a
2.4 GHz Core2 Quad Q6600. They're cheap and the price/performance is
unbeatable. It would get you 64−bit and four cores. I would buy one
if the wife would ok a 5th computer in a one bedroom apartment :)

> It's probably harder to make something similar
> with heap multiplication, any idea?

Yes, but speculation isn't going to help me any, so lets save this
discussion for the future.
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