**proposed move to System F**

At the Manticore meeting on 11/7/07, we discussed moving BOM in the direction of System F.

The following summarize the proposed changes to the `<code>BOM</code>` module:

New syntactic forms:

- `let x : tau = y [tauVec]`
- `apply f [tauVec] (...) / (...)`
- `let x : tau = CONS [tauVec] (...)`
- `let x : tau = CONST [tauVec]`
- `throw k [tau] (...)`

New types:

- `alpha (* type variables *)`
- `forall alphaVec . tau`
- `T [tauVec]`
- `tau + tau`

Here are the changes to the datatypes in the `<code>BOM</code>` module:

```plaintext
datatype term
= ... E_Apply of (var * ty list * var list * var list)
E_Throw of (var * ty list * var list)
E_HLOp of (hlop * ty list * var list * var list)
and rhs
= ...
E_TyApply of (var * ty list)
E_DCon of (data_con * ty list * ty list)
and lambda = FB of
Unknown macro: { f }
and pat
= P_DCon of (data_con * ty list * var list)
P_DConst of (data_con * ty list)
and the changes to the BOMTy module:

datatype ty
= T_Var of ty_var
T_Forall of (ty_var list * ty)
T_TyCon of (tyc * ty list)
... We'll also need to add the `<code>ty_var</code>` type and make changes to the representation of `<code>tyc</code>`.