**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:

datatype `term`

```plaintext`
    = ...
    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`

```plaintext`
    = ...
    E_TyApply of (var * ty list)
    E_DCon of (data_con * ty list * ty list)
    ...
```

and `lambda = FB of`

```plaintext`
    Unknown macro: { f }
```

and `pat`

```plaintext`
    = P_DCon of (data_con * ty list * var list)
    P_DConst of (data_con * ty list)
    ...
```

and the changes to the `<code>BOMTy</code>` module:

datatype `ty`

```plaintext`
    = 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>`s.