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:

```plaintext
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>.