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

= ...

| 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>`'s.