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 BOM 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 BOM 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 ty_var type and make changes to the representation of tyc.

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