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-- file: DebuggerDefs.Mesa
-- last edited by Barbara, July 31, 1978  11:58 AM

DIRECTORY
  AltoDefs: FROM "altodefs" USING [wordlength],
  BcdDefs: FROM "bcddefs" USING [VersionStamp],
  ControlDefs: FROM "controldefs" USING [
    BytePC, FrameHandle, GlobalFrameHandle, SignalDesc],
  CoreSwapDefs: FROM "coreswapdefs" USING [SVPointer],
  StringDefs: FROM "stringdefs" USING [SubString],
  SymbolTableDefs: FROM "symboltabledefs" USING [SymbolTableBase],
  SymDefs: FROM "symdefs" USING [
    BTIndex, CBTIndex, CTXIndex, ISEIndex, SEIndex];

DEFINITIONS FROM ControlDefs, StringDefs, SymDefs, SymbolTableDefs;

DebuggerDefs: DEFINITIONS =

BEGIN

FormatRecord: TYPE = RECORD[
 indentation: CARDINAL,
 symdelim, intersym, startchar, termchar: CHARACTER,
 symid, firstsym: BOOLEAN];

SA: TYPE = RECORD [CARDINAL];              --for short address calculations

LA: TYPE = RECORD [           --for long address calculations
  SELECT OVERLAID * FROM
    LA => [low, high: CARDINAL],
    LP => [lp: LONG POINTER],
    LI => [li: LONG INTEGER],
    ENDCASE];

SearchType: TYPE = {mod, config};

MainBTI: SymDefs.CBTIndex = FIRST[CBTIndex]; --cbti for program

SeiHandle: TYPE = RECORD[
  stbase: SymbolTableBase,
  sei: ISEIndex];

fullbitaddress: TYPE = RECORD [
  bd: [0..AltoDefs.wordlength),
  wd: SELECT tag: * FROM
    short => [shortAddr: SA],
    long => [longAddr: LA],
    ENDCASE];

SymbolObject: TYPE = RECORD[
  stbase: SymbolTableBase,
  tsei: SEIndex,
  sei: ISEIndex,
  there: BOOLEAN,
  space: [0..AltoDefs.wordlength],
  baddr: fullbitaddress];

SymFrameHandle: TYPE = RECORD[
  stbase: SymbolTableBase,
  faddr: FrameHandle];

SOPointer: TYPE = POINTER TO SymbolObject;
FRPointer: TYPE = POINTER TO FormatRecord;

VersionStamp: TYPE = BcdDefs.VersionStamp;

addbitaddrs: PROCEDURE [a,b: fullbitaddress] RETURNS [c: fullbitaddress];
BodySei: PROCEDURE [f: SymFrameHandle] RETURNS [sei: ISEIndex];
CatchFrame: PROCEDURE [f: FrameHandle] RETURNS [BOOLEAN];
Display: PROCEDURE [sop: SOPointer, frp: FRPointer, doconst: BOOLEAN];
DisplayFrame: PROCEDURE [f: UNSPECIFIED];
DisplayStack: PROCEDURE;
DumpCatchFrame: PROCEDURE [f: FrameHandle];
DumpCharacter: PROCEDURE [c: UNSPECIFIED];
DumpCtxFromState: PROCEDURE [tsei: SymDefs.SEIndex, frp: FRPointer,
  symbase: SymbolTableDefs.SymbolTableBase, ps: CoreSwapDefs.SVPointer,
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    sigerr: BOOLEAN];
DumpCtxList: PROCEDURE [c: SymDefs.CTXIndex, sbase: SymbolTableBase,
    there: BOOLEAN, faddr: fullbitaddress, frp: FRPointer];
DumpLocals: PROCEDURE [bsei: ISEIndex, frp: FRPointer, f: SymFrameHandle];
DumpNoSymbols: PROCEDURE [frame: FrameHandle];
DumpParameters: PROCEDURE [bsei: ISEIndex, frp: FRPointer, f: SymFrameHandle];
DumpRetVals: PROCEDURE [bsei: ISEIndex, frp: FRPointer, f: SymFrameHandle];
DumpSource: PROCEDURE [sei: ISEIndex, frp: FRPointer, f: SymFrameHandle];
DumpValsFromState: PROCEDURE [bsei: ISEIndex, frp: FRPointer,
    symbase: SymbolTableBase, ps: CoreSwapDefs.SVPointer];
DumpVar: PROCEDURE [s: STRING, where: SearchType];
EquivalentVersions: PROCEDURE [v1, v2: VersionStamp] RETURNS [BOOLEAN];
FieldContext: PROCEDURE [stbase: SymbolTableBase, type: SEIndex]
    RETURNS [CTXIndex];
FrameRelBPC: PROCEDURE [f: FrameHandle] RETURNS [BytePC];
fullsymaddress: PROCEDURE [sop: SOPointer] RETURNS [fullbitaddress];
GetValue: PROCEDURE [sop: SOPointer] RETURNS [UNSPECIFIED];
GetValueN: PROCEDURE [sop: SOPointer, n: CARDINAL] RETURNS [UNSPECIFIED];
GlobalDump: PROCEDURE [gframe: GlobalFrameHandle];
InitSOP: PROCEDURE [sop: SOPointer];
ListOptions: PROCEDURE [trace: BOOLEAN];
LocalDump: PROCEDURE [frame: FrameHandle];
Lookup: PROCEDURE [s: STRING, publiconly: BOOLEAN, sop: SOPointer,
    type: BOOLEAN, search: SearchType] RETURNS [found: BOOLEAN];
LookupLocals: PROCEDURE [sop: SOPointer, ss: SubString]
    RETURNS [BOOLEAN];
LookupProc: PROCEDURE [proc: STRING]
    RETURNS [found: BOOLEAN, gframe: GlobalFrameHandle, e: CARDINAL];
LookupProg: PROCEDURE [prog: STRING] RETURNS [found: BOOLEAN,
    gframe: GlobalFrameHandle, stbase: SymbolTableBase];
MainBodyFrame: PROCEDURE [f: SymFrameHandle] RETURNS [BOOLEAN];
ModuleDump: PROCEDURE [m: STRING];
PcToBTI: PROCEDURE [stbase: SymbolTableBase, pc: BytePC] RETURNS [BTIndex];
PcToCBTI: PROCEDURE [stbase: SymbolTableBase, pc: BytePC] RETURNS [CBTIndex];
PreviousFrame: PROCEDURE [f: FrameHandle] RETURNS [FrameHandle];
QualifyRecord: PROCEDURE [sop: SOPointer, ss: SubString]
    RETURNS [BOOLEAN];
SearchForBasicSym: PROCEDURE [s: STRING, sop: SOPointer] RETURNS [BOOLEAN];
SearchForModuleSym: PROCEDURE [mod: STRING, s: STRING,
    publiconly: BOOLEAN, sop: SOPointer, type: BOOLEAN] RETURNS [BOOLEAN];
SearchFrameForSym: PROCEDURE [frame: FrameHandle, s: STRING,
    publiconly: BOOLEAN, sop: SOPointer, type: BOOLEAN] RETURNS [BOOLEAN];
SearchGFrameForSym: PROCEDURE [gframe: GlobalFrameHandle, s: STRING,
    publiconly: BOOLEAN, sop: SOPointer, type: BOOLEAN] RETURNS [BOOLEAN];
SigSeiHandle: PROCEDURE [sigv: SignalDesc] RETURNS [sh: SeiHandle];
VariantRecord: PROCEDURE [sop: SOPointer, ss: SubString] RETURNS [BOOLEAN];
WriteBodyName: PROCEDURE [f: SymFrameHandle, printFrames: BOOLEAN];
WriteBlanks: PROCEDURE [CARDINAL];
WriteFrameLocus: PROCEDURE [f: SymFrameHandle, psource: BOOLEAN];
WriteSeiHandle: PROCEDURE [sh: SeiHandle];
WriteSource: PROCEDURE [f: GlobalFrameHandle, pc: BytePC, scroll: BOOLEAN];
WriteSubString: PROCEDURE [s: StringDefs.SubString];
WriteSymDef: PROCEDURE [sop: SOPointer, frp: FRPointer];
WriteTransferName: PROCEDURE [sh: SeiHandle, fullname: BOOLEAN,
    frame: FrameHandle, gframe: GlobalFrameHandle];

AmIaRecord: SIGNAL RETURNS [BOOLEAN];
ClobberedAccessLink: ERROR [f: FrameHandle];
ClobberedFrame: ERROR [f: FrameHandle];
NoPreviousFrame: ERROR [f: FrameHandle];
SymbolTableNotFound: SIGNAL;

END ...
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