Incrementally simplifying the PNaCl bitcode format

This is a list of changes we might make to the PNaCl bitcode format (as implemented by the forked LLVM bitcode reader/writer in lib/Bitcode/NaCl) to simplify it.

Proposed for M30:

* Remove function attributes
  + Remove top-level PARAMATTR\_BLOCK and PARAMATTR\_GROUP\_BLOCK\_ID
  + Motivation: Format complexity reduction
  + Doesn’t break compatibility
* Remove TRIPLE and DATALAYOUT: these should be implicit, because PNaCl only supports a fixed configuration.
  + Motivation: Small complexity reduction
  + Doesn’t break compatibility?
* Convert GlobalVariable initializers to be represented as bytes+relocations arrays
  + This allows two follow-on simplifications:
    - Remove the top-level constants block.
    - Remove the top-level types block. Other references to types can refer to scalar type IDs directly.
  + Motivation: Big format complexity reduction
  + Motivation: Pexe size reduction (the extent depends on pexe’s data segment size)
  + Does break compatibility
* Require all forward value references to be declared at the start of a function
  + This would mean that operands are consistently represented as a single field, instead of being 1 or 2 fields.
  + This would remove the distinction between getValueTypePair() and popValue() in the reader.
  + Motivation: Large complexity reduction

Not proposed for M30:

* Remove code for handling unsupported instructions:
  + getelementptr
  + invoke, landingpad, resume
  + insertvalue, extractvalue (struct operations)
  + insertelement, extractelement, shufflevec (vector operations)
  + indirectbr
  + va\_arg
  + etc.
  + Motivation: Code complexity/size reduction
  + Doesn’t break compatibility
* Remove pointer types from intrinsic declarations and replace with i32
  + Motivation: Format complexity reduction
* Remove blockaddress support
  + Motivation: Code complexity/size reduction
* Remove the inttoptr instruction.
  + Make inttoptr implicit in instructions that take pointer operands: load, store, indirect calls (callee operand), intrinsic calls (e.g. pointer operands to memcpy), cmpxchg, atomicrmw.
  + Motivation: Pexe size reduction; format complexity reduction
* Remove the ptrtoint instruction
  + Make this implicit when getting the value of an alloca or the address of a GlobalValue as an i32.
  + Motivation: Pexe size reduction; format complexity reduction
* Remove bitcasts of pointers -- make these implicit
  + This probably falls out of removing inttoptr and ptrtoint (above)
* Remove code for supporting obsolete representations in specific cases:
  + TYPE\_CODE\_FUNCTION\_OLD
  + FUNC\_CODE\_INST\_CMP2
  + Doesn’t break compatibility
* Drop support for absolute Value IDs -- assume UseRelativeIDs is true
  + Motivation: Code complexity reduction
  + Doesn’t break compatibility