―――――― MODULE $Nv0000Classes$ ――――――

EXTENDS *Naturals*

CONSTANTS

$Nv0000CtrlReserved$,	Reserved.
$Nv0000CtrlSystem$,	Command for system.
$Nv0000CtrlGpu$,	Command for *GPU*.
$Nv0000CtrlGsync$,	Command for *GSYNC*.
$Nv0000CtrlDiag$,	Command for Diagnostics.
$Nv0000CtrlEvent$,	Command for Event interactions.
$Nv0000CtrlNvd$,	Command for *NVIDIA* Debug Dumps.
$Nv0000CtrlSwInstr$,	Command for *SW* Instruction.
$Nv0000CtrlGspC$,	Unknown.
$Nv0000CtrlProc$,	Command for /proc commands.
$Nv0000CtrlSyncGpuBoost$,	Command for *SLI GPU* Boosts.
$Nv0000CtrlGpuAcct$,	Command for *GPU* accounting.
$Nv0000CtrlVgpu$,	Command for *vGPUs*.
$Nv0000CtrlClient$	Command for Clients.

―――――――――――――――――― CLIENTS ――――――――――――――――――

CONSTANTS

$Nv0000CtrlCmdGetAddrSpaceType$,	Query memory address space type associated with an object.
$Nv0000CtrlCmdGetHandleInfo$,	Query information on a handle.
$Nv0000CtrlCmdClientGetAccessRights$,	Gets access rights for an object, the object does not need to be owned by the client requesting the access rights.
$Nv0000CtrlCmdSetInheritedShare$,	Sets an inherited policy list.
$Nv0000CtrlCmdGetChildHandle$,	Gets the child handle of a given type.
$Nv0000CtrlCmdShareObject$	Deprecating this command, but it is designed to share an

object.

Possible address space types.
CONSTANTS
$\quad$ $AddrSpaceTypeInvalid$,
$\quad$ $AddrSpaceTypeSysmem$,
$\quad$ $AddrSpaceTypeVidmem$,
$\quad$ $AddrSpaceTypeRegmem$,
$\quad$ $AddrSpaceTypeFabric$

$AddrSpaceTypes \triangleq$
$\quad \{ AddrSpaceTypeInvalid$
$\quad , AddrSpaceTypeSysmem$
$\quad , AddrSpaceTypeVidmem$
$\quad , AddrSpaceTypeRegmem$
$\quad , AddrSpaceTypeFabric$
$\quad \}$

Object for getting the address space type.
$NvGetAddrSpaceType \triangleq$
$\quad [object : Nat$ $\qquad$ Object handle we attempt to look up. [IN]

$\quad , mapFlags : Nat$ $\qquad$ Flags for mapping a space addr type. [IN]

$\quad , addrSpaceType : AddrSpaceTypes$ $\qquad$ Type of address space. [OUT]
$\quad]$

This is the $NV0000$ Allocation Object.
$Nv0000AllocParams \triangleq [client : Nat$ $\qquad$ This is the client id which allows the process to interact with the driver.

$\qquad , processID : Nat$ $\qquad$ This is the $processID$ to lock the resources to.
There is also a name parameter which we removed as it serves no purpose in our specs.

$\qquad]$

$Nv0000Ctrls \triangleq$
$\quad [Nv0000CtrlReserved : \{\}] \cup$
$\quad [Nv0000CtrlClient : \{Nv0000CtrlCmdGetAddrSpaceType$
$\qquad\qquad\qquad , Nv0000CtrlCmdGetHandleInfo$
$\qquad\qquad\qquad , Nv0000CtrlCmdClientGetAccessRights$
$\qquad\qquad\qquad , Nv0000CtrlCmdSetInheritedShare$
$\qquad\qquad\qquad , Nv0000CtrlCmdGetChildHandle$

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$$, Nv0000CtrlCmdShareObject$$
$$\}] \cup$$
$$[Nv0000CtrlGspC : \{\}]$$

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