3. System Class Diagram

Windows Application

```
VirtualSurface virtual_surface;

INT WINAPI WinMain(...);
INT WinInitialise(...);
INT WinFramework(...);
INT WinMessagePump(...);
INT WinCreate(...);
LRESULT CALLBACK
    WinMessageProcess(...);
INT WinResizeBackBuffer(...);
INT WinResources(...);
```

AppDependency

```
+ CHAR app_name[VS_MAXCHARNAME];
+ VNode        *app_config_data;
+ VNode        *sys_config_data;
+ VNode        *view_config_data;
+ GfxInterface *gfx_interface;
+ SysContext   *sys_context;
+ SysInput     *sys_input;
+ SysOutput    *sys_output;
```

SysInput

```
+ BOOL   GetBool(UINT);
+ UINT   GetMouseButtonBitMask();
+ INT    GetInt(UINT);
+ LONG   GetLong(UINT);
+ POINT *GetPosition();
+ INT    GetDelta(POINT *);
+ POINT *GetLast();

+ INT SetBool(UINT, BOOL);
+ INT SetInt(UINT, INT);
+ INT SetLong(UINT, LONG);
+ INT SetKeyboardChar(INT, INT);
+ INT SetMouseButtonBitMask(INT, INT);
+ INT SetClientCursorPosition(POINT *);

- class PI_SysInput;
- PI_SysInput *pi_sys_input;
```

VirtualSurface

```
+ AppDependency    app_dependency;
+ AppInterface     app_interface;
+ GfxInterface    *gfx_interface;
+ SysContext      *sys_context;
+ SysInput        *sys_input;
+ SysOutput       *sys_output;
```

SysContext

```
+ INT Configure(vs_system::VNode*);
+ INT ConfigureWindow();

+ void   GetClientRect(RECT*);
+ DOUBLE GetTimeDelta();
+ DOUBLE GetTimeElapsed();
+ DOUBLE GetTimeNow();

+ BOOL   GetBool(UINT);
+ DOUBLE GetDouble(UINT);
+ CHAR  *GetChar(UINT);
+ DWORD  GetDWord(UINT);
+ FLOAT  GetFloat(UINT);

+ INT SetMovingRect(RECT*);

+ INT SetBool(UINT, BOOL);
+ INT SetDouble(UINT, DOUBLE);
+ INT SetChar(UINT, CHAR *);
+ INT SetDWord(UINT, DWORD);
+ INT SetFloat(UINT, FLOAT);

- class PI_SysContext;
- PI_SysContext *pi_sys_context;
```

SysOutput

```
+ VOID Message(CHAR *);
+ VOID MessageOk(UINT, INT);
+ VOID MessageOk(UINT);
+ INT  MessageOk(CHAR *);
+ INT  MessageQuery(CHAR *);
+ INT  MessageEscape(UINT);

+ INT  WriteFile(CHAR *);

+ BOOL GetDebug();
+ BOOL GetLog();

+ VOID SetDebug(BOOL);
+ VOID SetLog(BOOL);
+ INT  Initialise();

- class PI_SysOutput;
- PI_SysOutput *pi_sys_output;
```

AppInterface

```
+ INT Setup(CHAR*);
+ INT Framework(UINT, AppDependency*)

- CHAR application_name[VS_MAXCHARLEN];

- AppInterfaceSocket application_socket;

- INT (
       AppInterface ::
     *ptr_to_application_framework)(
       UINT,
       AppDependency*
     );

- INT application(UINT, AppDependency*)
```

GfxInterface