2.4 FORMULARIO PRINCIPAL

Form_Ppal.h [Diseño]

El aspecto de la interfaz de usuario de la aplicación OTOLIVE puede ser como el que vemos a continuación. Una ventana práctica y funcional, pequeña para no ocupar espacio innecesario en la pantalla, el cual será más necesario para mostrar imágenes que para ver estos menús. Con todos los botones necesarios para acceder a todas las opciones del proyecto, etc. Desde Menú se puede Abrir, crear un proyecto Nuevo, Guardar, ir a Propiedades o Salir de la aplicación completamente; desde Proyecto, se llama a las funciones principales de Información General, Calibrar Microscopio y Transecto, además de Obtener Resultados cuando se haya finalizado una lectura de un otolito (esta es la parte en la que la aplicación interpreta los datos obtenidos gracias a los conteos de los investigadores, para aportar conclusiones propias y recurrir a la estadística); por último, desde Cámara se pueden activar los modos de Video o de Captura de la cámara científica, sin necesidad de estar ejecutando otras funciones de la aplicación.

| | OTOLIVE 🔳 |
|---|-----------|
| | Menú |
| | Proyecto |
| | Cámara |
| 1 | 0 6 🖥 |
| 1 | 😑 🚥 💹 |
| ÷ | 8 6 0 |
| Ĺ | |

Figura 21.- Formulario Principal

<u>Form_Ppal.h</u>

Primero decir que los salto de líneas de código que se ven a continuación se deben a que se está obviando código que se agregó automáticamente y que no merece la pena mostrar. Por ejemplo, cuando se añade un botón, éste acarrea muchas propiedades fijadas por defecto, y normalmente ninguna o muy pocas serás usadas con algún propósito después, y si se usan, se configuran en otras partes del código que por supuesto no se ocultarán y serán debidamente explicadas.

```
1
     #pragma once
2
     // cabeceras de los dialogos secundarios
3
4
     #include "Dlg_InfGral.h"
5
     #include "Dlg Calib.h"
     #include "Dlg_Transect.h"
6
7
. . .
14
15
     // para guardar la informacion en la base de datos
     using namespace Microsoft::Office::Interop::Excel;
16
17
     // para acortar codigo
18
     #define DlgRes System::Windows::Forms::DialogResult
19
20
     namespace OTOLIVE {
21
         /// <summary>
2.2
23
         /// Resumen de Form Ppal
24
        111
25
        /// ADVERTENCIA: si cambia el nombre de esta clase, deberá cambiar la
                     propiedad 'Nombre de archivos de recursos' de la herramienta de
        111
26
     compilación de recursos administrados
         111
27
                     asociada con todos los archivos .resx de los que depende esta
     clase. De lo contrario,
28
                     los diseñadores no podrán interactuar correctamente con los
        111
         111
29
                      recursos adaptados asociados con este formulario.
         /// </summary>
30
        public ref class Form Ppal : public System::Windows::Forms::Form
31
32
        public:
33
34
           // definicion de variables para comunicacion con otros procesos, internos y
     externos
35
           Form_Ppal(void) :
36
               /\overline{/} para comunicarse con la base de datos
37
                 exApp(gcnew Microsoft::Office::Interop::Excel::ApplicationClass())
38
               // para comunicarse con InfGral
39
               , dlgInfGral(gcnew Dlg_InfGral())
               , listoInfGral(false)
40
41
                 limpiarInfGral(false)
               // para comunicarse con InfGral
42
43
               , dlgCalib(gcnew Dlg_Calib())
               , listoCalib(false)
44
45
                 limpiarCalib(false)
46
               // para comunicarse con Transect
47
               //, dlgTransect(gcnew Dlg_Transect())
               //, listoTransect(false)
//, limpiarTransect(false)
48
49
50
            {
51
               InitializeComponent();
52
               //TODO: agregar código de constructor aquí
53
54
               11
55
            }
56
57
        protected:
            /// <summary>
58
59
            /// Limpiar los recursos que se estén utilizando.
            /// </summary>
60
            ~Form_Ppal()
61
62
            {
63
               if (components)
64
               {
65
                  delete components;
66
               }
67
            }
. .
419
     #pragma endregion
420
421
            // variable de comunicacion con Excel
422
            Microsoft::Office::Interop::Excel::Application^ exApp;
423
            // variable de comunicacion con el dialogo de informacion general
            Dlg_InfGral^ dlgInfGral;
424
                                     // true si se pulsa Aceptar
425
            bool listoInfGral;
                                    // true si se pulsa Limpiar
426
            bool limpiarInfGral;
427
            // variable de comunicacion con el dialogo para calibrar el microscopio
            Dlg Calib^ dlgCalib;
428
            bool listoCalib;
429
                                   // true si se pulsa Aceptar
```

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```
430
           bool limpiarCalib;
                                // true si se pulsa Limpiar
431
           // para usar #define DlgRes System::Windows::Forms::DialogResult y acortar
     codigo
432
           DlgRes result;
433
434
           private: System::Void
     informaciónGeneralToolStripMenuItem Click(System::Object^ sender,
     System::EventArgs^ e)
435
           {
436
               // abrimos el dialogo de Informacion General y guardamos lo que devuelve
              result = dlgInfGral->ShowDialog();
437
438
               if (result == DlgRes::OK)
                                              // boton Aceptar -> DlgRes::OK
439
                  listoInfGral = true;
               else if (result == DlgRes::Yes)
440
                                                // boton Limpiar -> DlgRes::Yes
441
                 limpiarInfGral = true;
           }
442
443
444
           private: System::Void
     calibrarMicroscopioToolStripMenuItem Click(System::Object^ sender,
     System::EventArgs^ e)
445
           {
446
               // abrimos el dialogo de Calibrar Microscopio y guardamos lo que devuelve
              result = dlgCalib->ShowDialog();
447
                                               // boton Aceptar -> DlgRes::OK
              if (result == DlgRes::OK)
448
                 listoCalib = true;
449
450
               else if (result == DlgRes::Yes)
                                                // boton Limpiar -> DlgRes::Yes
                 limpiarCalib = true;
451
452
           }
453
454
           private: System::Void guardarToolStripMenuItem Click(System::Object^ sender,
     System::EventArgs^ e)
455
           {
456
              // añadimos un workbook al documento de Excel creado (se crea con tres
     Worksheets)
457
              Workbook^ exWb = exApp->Workbooks->Add(Type::Missing);
458
               // borramos las dos ultimas worksheets
               safe cast<Worksheet^>(exApp->ActiveWorkbook->Sheets[3])->Delete();
459
               safe cast<Worksheet^>(exApp->ActiveWorkbook->Sheets[2])->Delete();
460
461
               // variable para trabajar con las worksheets (por defecto empieza con la
     primera, la que tenemos)
462
              Worksheet^ exWs = safe cast<Worksheet^>(exApp->ActiveSheet);
              // renombramos el worksheet activo (es decir, el primero)
463
464
              exWs->Name = "Información General";
465
466
               // si la Informcion General ya ha sido introducida
467
               if (listoInfGral)
468
               {
469
                  // cargamos los datos
                  exWs->Cells[ 2, 2] = "Información General";
470
471
                  exWs->Cells[ 2, 4] = dlgInfGral->NombreExp;
                  exWs->Cells[ 4, 2] = "Género";
472
473
                  exWs->Cells[ 4, 4] = dlgInfGral->Genero;
474
                 exWs->Cells[ 5, 2] = "Estado";
                 exWs->Cells[ 5, 4] = dlgInfGral->Estado;
exWs->Cells[ 6, 2] = "Corte";
475
476
477
                  exWs->Cells[ 6, 4] = dlgInfGral->Corte;
478
                  exWs->Cells[ 7, 2] = "Otolito";
479
                 exWs->Cells[ 7, 4] = dlgInfGral->Otolito;
                 exWs->Cells[ 8, 2] = "Especie";
480
481
                  exWs->Cells[ 8, 4] = dlgInfGral->Especie;
482
                  exWs->Cells[ 9, 2] = "Lectura";
483
                 exWs->Cells[ 9, 4] = dlgInfGral->Lectura;
484
                 exWs->Cells[11, 2] = "Código";
                 exWs->Cells[11, 4] = dlgInfGral->Codigo;
exWs->Cells[12, 2] = "Campaña";
485
486
487
                  exWs->Cells[12, 4] = dlgInfGral->Campana;
                 exWs->Cells[13, 2] = "Barco";
488
489
                 exWs->Cells[13, 4] = dlgInfGral->Barco;
490
                  exWs->Cells[14, 2] = "Número de Lance";
491
                  exWs->Cells[14, 4] = dlgInfGral->NumLance;
                 exWs->Cells[15, 2] = "Profundidad (m)";
492
                  exWs->Cells[15, 4] = dlgInfGral->Profundidad;
493
                  exWs->Cells[16, 2] = "Fecha del Lance";
494
495
                  exWs->Cells[16, 4] = dlgInfGral->FechaLance;
496
                  exWs->Cells[17, 2] = "Tipo de Peso";
497
                  exWs->Cells[17, 4] = dlgInfGral->RdPeso;
                  exWs->Cells[18, 2] = "Peso (gr)";
498
```

| <pre>sws->cells[3, 2] = "longitud Total (mm)"; exWs->cells[2], 2] = "gecha de la Lectura"; exWs->cells[2], 2] = "gecha de la Lectura"; exWs->cells[2], 2] = "linefral->kombreinv; exWs->cells[2], 2] = "linefral->kombreinv; exWs->cells[2], 2] = "lobservaciones"; exWs->cells[2], 2] = "digitarGral->kombreinv; exWs->cells[2], 2] = "lobservaciones"; exWs->cells[2], 2] = "lo</pre> | 499 | exWs->Cells[18, 4] = dlgInfGral->Peso; |
|---|------------|---|
| <pre>b01 exWs->Cells[2, 2] = "iecha de la Lectura"; exWs->Cells[2, 4] = diginfGral->Longitud; exWs->Cells[2, 4] = diginfGral->Cobservationes; } exWs->Cells[2, 4] = diginfGral->Cobservationes; } exWs->Cells[2, 4] = diginfGral->Cobservationes; } exWs->Cells[2, 2] = "information General"; exWs->Cells[2, 2] = "information General"; exWs->Cells[2, 2] = "information General"; exWs->Cells[2, 2] = "Genero"; exWs->Cells[2, 2] = "Genero"; exWs->Cells[3, 4] = "; exWs->Cells[4, 4] = "; exWs->Cells[5, 4] = "; exWs->Cells[5, 4] = "; exWs->Cells[5, 4] = "; exWs->Cells[6, 2] = "Lectura"; exWs->Cells[6, 2] = "Codigo"; exWs->Cells[1, 4] = "; exWs->Cells[1, 4] = "; exWs->Cells[1, 2] = "Campaha"; exWs->Cells[1, 2] = "Codigo"; exWs->Cells[1, 2] = "Exaco"; exWs->Cells[1, 2] = "Exaco"; exWs->Cells[1, 2] = "Terchadel Lance"; exWs->Cells[1, 4] = "; exWs->Cells[2, 6] = "Unicader; exWs->Cells[2, 6] = "Unicader; exWs->Cells[2, 6] = "Unicader; exWs->Cells[2, 6] = "Unicader; exW</pre> | 500 | <pre>exWs->Cells[19, 2] = "Longitud Total (mm)";</pre> |
| <pre>sxts->Cells[2], 2] = "Techa de la Lectura"; exts->Cells[2], 2] = "Whener of Lacturas"; exts->Cells[2], 2] = "linetalec; exts->Cells[2], 2] = "linetalec; exts->Cells[2], 2] = "linetalec; exts->Cells[2], 2] = "linetalec; exts->Cells[2], 2] = "Contents'; exts->Cells[2], 2] = "linetalec; exts->Cells[2], 2] = "information General"; exts->Cells[2], 2] = "information General"; exts->Cells[3], 2] = "Bitado"; exts->Cells[3], 2] = "Bitadod [mn]"; exts->Cells[3], 2] = "Tordendidd (mn]"; exts->Cells[3], 2] = "Bitadod [mn]"; exts->Cells[3], 4] = ""; exts->Cells[3], 4] = ""; exts->Cells[3], 4] = ""; ext</pre> | 501 | exWs->Cells[19, 4] = dlgInfGral->Longitud; |
| <pre>303 at x x x x x x x x x x x x x x x x x x x</pre> | 502 | exWs->Cells[21, 2] = "Fecha de la Lectura"; |
| <pre>dxms-Cells[2, 2] = MumerO abcounts; dxms-Cells[2], 2] = diginfGrai-NumberCinv; exms-Cells[2], 2] = "infGrai-NumberCinv; exms-Cells[2], 2] = "dbservaciones"; exms-Cells[2], 2] = "infGrai-NumberCinv; exms-Cells[2], 2] = "infGrai-NumberCinv; exms-Cells[3], 4] = "infGrai-NumberCinv; exms-Cells[3], 4] = "infGrai-NumberCinv; exms-Cells[3], 4] = "infGrai-NumberCinv</pre> | 503 | exws->Cells[21, 4] = diginiGrai->Fechalec; |
| <pre>come->cels[2], 2] = "investigador"; exWe->cels[2], 2] = "investigador"; exWe->cels[2], 2] = "diginfGral->NombreInv; exWe->cels[2], 2] = "diginfGral->NombreInv; exWe->cels[2], 2] = "informacion General"; exWe->cels[2], 2] = "informacion General"; exWe->cels[3], 2] = "informacion"; exWe->cels[3], 2] = "informacion"; exWe->cels[3], 4] = ""; exWe->cels[3], 5] = "Wintometry; exWe->cels[3], 6] = "Wintometry; exWe->cels[3], 6] = "Wintometry; exWe->cels[3], 8] = "", 4 digCelin->Coular; exWe->cels[3], 8] = "", 4 digC</pre> | 505 | exws = 2cells[22, 2] = Numero de Leccuras; |
| <pre>ison ison=>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>></pre> | 506 | exWs > Cells[22, 4] = urginidial > Number,exWs - > Cells[23, 2] = "Investigador": |
| <pre>sx%=>Cells[25, 2] = "Observationes"; ex%=>Cells[25, 4] = dlgInfGral=>Observationes; } ex%=>Cells[2, 4] = "; is equiper limpianos los datos deve=>Cells[2, 2] = "información General"; ex%=>Cells[2, 2] = "información"; ex%=>Cells[1, 4] = ""; ex%=>Cells[1, 4] = ""; ex%=>Cells[2, 6] = "Micrómetro"; ex%=>Cells[2, 6] = "Micróm</pre> | 507 | exWs > Cells[23, 2] $investigator,exWs - > Cells[23, 4] = d] gInfGral - > NombreInv;$ |
| <pre>sws=>Cells[25, 4] = dlgInfGral=>Observaciones; } slop else if (limpiarInfGral) // si se quiere limpiar (// limpiamos los datos sws=>Cells[2, 2] = "Información General"; exws=>Cells[4, 2] = "Genero"; exws=>Cells[4, 4] = ""; state exws=>Cells[5, 2] = "Estado"; exws=>Cells[5, 4] = ""; state exws=>Cells[5, 4] = ""; exws=>Cells[6, 4] = ""; exws=>Cells[7, 4] = ""; exws=>Cells[11, 2] = "Codigo"; exws=>Cells[11, 2] = "Codigo"; exws=>Cells[11, 2] = "Codigo"; exws=>Cells[11, 2] = "Codigo"; exws=>Cells[12, 2] = "Barco"; exws=>Cells[12, 2] = "Barco"; exws=>Cells[12, 2] = "Barco"; exws=>Cells[12, 2] = "Profundidad (m)"; exws=>Cells[12, 2] = "Profundidad (m)"; exws=>Cells[12, 4] = ""; exws=>Cells[13, 4] = ""; exws=>Cells[14, 4] = ""; exws=>Cells[24, 4] =</pre> | 508 | exWs->Cells[25, 2] = "Observaciones"; |
| <pre>110</pre> | 509 | exWs->Cells[25, 4] = dlgInfGral->Observaciones; |
| <pre>511</pre> | 510 | } |
| <pre>512 { 513 // limpiamos los datos 514 extws->Cells[2, 2] = "Información General"; 515 extws->Cells[4, 2] = "Genero"; 516 extws->Cells[4, 2] = "Genero"; 517 extws->Cells[5, 2] = "Estado"; 518 extws->Cells[5, 2] = "Corte"; 520 extws->Cells[6, 2] = "Corte"; 521 extws->Cells[7, 2] = "Detolito"; 522 extws->Cells[7, 2] = "Cotlito"; 523 extws->Cells[8, 2] = "Especie"; 524 extws->Cells[8, 2] = "Especie"; 525 extws->Cells[9, 4] = ""; 526 extws->Cells[9, 4] = ""; 527 extws->Cells[1, 2] = "Codigo"; 528 extws->Cells[1, 2] = "Codigo"; 529 extws->Cells[1, 2] = "Codigo"; 529 extws->Cells[1, 4] = ""; 530 extws->Cells[1, 4] = ""; 531 extws->Cells[1, 4] = ""; 532 extws->Cells[1, 4] = ""; 533 extws->Cells[1, 4] = ""; 534 extws->Cells[1, 4] = ""; 535 extws->Cells[1, 4] = ""; 536 extws->Cells[1, 4] = ""; 537 extws->Cells[1, 4] = ""; 538 extws->Cells[1, 4] = ""; 539 extws->Cells[1, 4] = ""; 540 extws->Cells[1, 4] = ""; 541 extws->Cells[1, 4] = ""; 542 extws->Cells[1, 4] = ""; 544 extws->Cells[1, 4] = ""; 545 extws->Cells[1, 4] = ""; 546 extws->Cells[1, 4] = ""; 547 extws->Cells[1, 4] = ""; 548 extws->Cells[2, 2] = "Hoend del Lance"; 549 extws->Cells[1, 4] = ""; 540 extws->Cells[2, 2] = "Nithero de Lectura"; 544 extws->Cells[2, 2] = "Nithero de Lecturas; 545 extws->Cells[2, 2] = "Nithero de Lecturas; 546 extws->Cells[2, 2] = "Nithero de Lecturas; 547 extws->Cells[2, 2] = "Nithero de Lecturas; 548 extws->Cells[2, 2] = "Nithero de Lecturas; 549 extws->Cells[2, 2] = "Nithero de Lecturas; 540 extws->Cells[2, 2] = "Nithero de Lecturas; 551 extws->Cells[2, 4] = ""; 552 extws->Cells[2, 4] = ""; 553 extws->Cells[2, 4] = ""; 554 limpiarInfGral = false; 555 } 555 // si ya se ha realizado la calibracion 558 if (listoCalib) 569 (560 extws->Cells[2, 6] = "Witroneopio"; 561 extws->Cells[2, 6] = "Witroneopio"; 562 extws->Cells[3, 6] = "x" + dlg</pre> | 511 | <pre>else if (limpiarInfGral) // si se quiere limpiar</pre> |
| <pre>513 // limpiamos los datos exWa->Cells[2, 2] = "Información General"; exWa->Cells[2, 2] = "Genero"; exWa->Cells[4, 2] = "Género"; exWa->Cells[5, 2] = "Estado"; exWa->Cells[5, 2] = "Estado"; exWa->Cells[5, 2] = "Corte"; exWa->Cells[6, 2] = "Corte"; exWa->Cells[6, 2] = "Corte"; exWa->Cells[7, 2] = "Otolito"; exWa->Cells[7, 2] = "Otolito"; exWa->Cells[8, 2] = "Especie"; exWa->Cells[8, 2] = "Especie"; exWa->Cells[9, 2] = "Lectura"; exWa->Cells[9, 2] = "Lectura"; exWa->Cells[11, 2] = "Codigo"; exWa->Cells[11, 2] = "Codigo"; exWa->Cells[11, 2] = "Codigo"; exWa->Cells[12, 2] = "Campafa"; exWa->Cells[12, 2] = "Campafa"; exWa->Cells[12, 2] = "Campafa"; exWa->Cells[12, 2] = "Campafa"; exWa->Cells[14, 2] = "" for exWa->Cells[15, 2] = "Profundiad (m)"; exWa->Cells[15, 2] = "Profundiad (m)"; exWa->Cells[15, 2] = "Profundiad (m)"; exWa->Cells[15, 2] = "Profundiad (m)"; exWa->Cells[16, 2] = "Fecha del Lance"; exWa->Cells[17, 2] = "Tipo de Peso"; exWa->Cells[17, 2] = "Tipo de Peso"; exWa->Cells[17, 2] = "Tipo de Peso"; exWa->Cells[19, 4] = ""; for exWa->Cells[19, 4] = ""; for exWa->Cells[19, 4] = ""; for exWa->Cells[19, 4] = ""; for exWa->Cells[19, 4] = ""; for exWa->Cells[21, 2] = "Eecha del Lance"; exWa->Cells[21, 2] = "Fecha del Lactura"; exWa->Cells[22, 2] = "Numero de Lecturas"; for exWa->Cells[22, 2] = "Investigador"; exWa->Cells[22, 2] = "Investigador"; for exWa->Cells[22, 2] = "Deserveciones"; for exWa->Cells[22, 2] = "Investigador"; for exWa->Cells[2</pre> | 512 | { |
| 514 exWa->Cells[2, 4] = "Informacion General"; 515 exWa->Cells[4, 4] = "Genero"; 516 exWa->Cells[5, 4] = ""; 517 exWa->Cells[5, 4] = ""; 518 exWa->Cells[5, 4] = ""; 520 exWa->Cells[6, 4] = ""; 521 exWa->Cells[7, 2] = "Corte"; 522 exWa->Cells[7, 4] = ""; 523 exWa->Cells[7, 4] = ""; 524 exWa->Cells[7, 4] = ""; 525 exWa->Cells[7, 4] = ""; 526 exWa->Cells[7, 4] = ""; 527 exWa->Cells[7, 4] = ""; 528 exWa->Cells[12, 2] = "Cotupat"; 529 exWa->Cells[12, 2] = "Cotupat"; 531 exWa->Cells[13, 4] = ""; 532 exWa->Cells[14, 4] = ""; 533 exWa->Cells[14, 4] = ""; 534 exWa->Cells[15, 4] = ""; 535 exWa->Cells[17, 4] = ""; 536 exWa->Cells[17, 4] = ""; 537 exWa->Cells[17, 4] = ""; 538 exWa->Cells[17, 4] = ""; 539 exWa->Cells[17, 4] = ""; 540 exWa->Cells[17, 4] = ""; 541 | 513 | // limpiamos los datos |
| 21:0 eXMS->Cells[4, 2] = ""; 21:0 eXMS->Cells[4, 4] = ""; 21:1 exMS->Cells[5, 2] = "Estado"; 21:1 exMS->Cells[5, 2] = "Corter; 22:1 exMS->Cells[6, 2] = "Corter; 23:1 exMS->Cells[7, 4] = ""; 24:1 exMS->Cells[7, 4] = ""; 25:2 exMS->Cells[7, 4] = ""; 26:2 exMS->Cells[7, 4] = ""; 27:1 exMS->Cells[7, 4] = ""; 28:2 exMS->Cells[7, 4] = ""; 29:2 exMS->Cells[7, 4] = ""; 20:3 exMS->Cells[7, 4] = ""; 21:2 exMS->Cells[7, 4] = ""; 22:3 exMS->Cells[12, 2] = "Compaña"; 23:3 exMS->Cells[12, 2] = "Compaña"; 24:4 exMS->Cells[12, 2] = "Pofendidd (m)"; 25:3 exMS->Cells[12, 2] = "Pofendidel Lance"; 25:3 exMS->Cells[12, 2] = "Tipo de Peso"; 25:4 exMS->Cells[17, 4] = ""; 26:4 exMS->Cells[12, 2] = "Longitud Total (m)"; 27:4 exMS->Cells[12, 2] = "Investigador"; 28:4 exMS->Cells[21, 4] = "; 29:5 exMS->Cells[22, 2] = "Nimero de Lecturas"; | 514 | exWs->Cells[2, 2] = "Información General"; |
| 210 exws-cells[4, 4] = ";"; 517 exws-cells[5, 4] = ";"; 518 exws-cells[5, 4] = ";; 520 exws-cells[6, 4] = ";; 521 exws-cells[7, 2] = "Otolito"; 522 exws-cells[7, 4] = "; 523 exws-cells[7, 4] = "; 524 exws-cells[7, 4] = "; 525 exws-cells[7, 4] = "; 526 exws-cells[7, 4] = "; 527 exws-cells[12, 2] = "Compaña;; 528 exws-cells[12, 4] = "; 529 exws-cells[12, 4] = "; 530 exws-cells[12, 4] = "; 531 exws-cells[12, 2] = "Compaña;; 532 exws-cells[12, 2] = "Compaña;; 533 exws-cells[14, 4] = "; 534 exws-cells[14, 4] = "; 535 exws-cells[14, 4] = "; 536 exws-cells[15, 2] = "Profunidad (m); 537 exws-cells[17, 2] = "Tipo de Peso"; 538 exws-cells[17, 2] = "Tipo de Peso"; 541 exws-cells[17, 2] = "Tipo de Peso"; 542 exws-cells[17, 2] = "Fecha de la Lectura"; 543 exws-cells[148, 4] = "; 544 | 515 | $exWs \rightarrow Cells[2, 4] = "";$ |
| 211 chas-Cells[5, 2] = "Estado"; 212 cxWa-Cells[5, 2] = "Corte"; 220 exWa-Cells[6, 2] = "Corte"; 221 exWa-Cells[7, 2] = "Otolito"; 222 exWa-Cells[7, 2] = "Otolito"; 223 exWa-Cells[8, 2] = "Especie"; 224 exWa-Cells[8, 2] = "Especie"; 225 exWa-Cells[9, 4] = ""; 226 exWa-Cells[1, 4] = ""; 227 exWa-Cells[1, 4] = ""; 228 exWa-Cells[1, 4] = ""; 229 exWa-Cells[1, 4] = ""; 230 exWa-Cells[1, 4] = ""; 231 exWa-Cells[1, 4] = ""; 232 exWa-Cells[1, 4] = ""; 233 exWa-Cells[1, 4] = ""; 234 exWa-Cells[1, 4] = ""; 235 exWa-Cells[1, 4] = ""; 236 exWa-Cells[1, 4] = ""; 237 exWa-Cells[1, 2] = "Fochadel Lance"; 238 exWa-Cells[1, 2] = "Tipo de Peso"; 239 exWa-Cells[1, 2] = ""ipo de Peso"; 241 exWa-Cells[1, 4] = ""; 242 exWa-Cells[1, 4] = ""; 244 exWa-Cells[2, 2] = "Nomero de Lactura"; | 510 517 | exws - > cells[4, 2] = "Genero"; |
| 213 Construction [5, 4] = ""; 220 exMs>Cells [5, 4] = ""; 221 exMs>Cells [6, 4] = "; 222 exMs>Cells [7, 4] = "colito"; 224 exMs>Cells [7, 4] = "; 224 exMs>Cells [7, 4] = "; 224 exMs>Cells [7, 4] = "; 225 exMs>Cells [7, 4] = "; 226 exMs>Cells [7, 4] = "; 227 exMs>Cells [1, 2] = "Lectura"; 228 exMs>Cells [1, 2] = "Codigo"; 229 exMs>Cells [1, 2] = "Campaña"; 229 exMs>Cells [1, 2] = "Campaña"; 231 exMs>Cells [1, 4] = "; 232 exMs>Cells [1, 4] = "; 233 exMs>Cells [1, 4] = "; 234 exMs>Cells [1, 4] = "; 235 exMs>Cells [1, 4] = "; 236 exMs>Cells [1, 4] = "; 237 exMs>Cells [1, 4] = "; 238 exMs>Cells [1, 2] = "Topoindiad (m)"; 239 exMs>Cells [1, 2] = "Tepeh del Lance"; 240 exMs>Cells [1, 2] = "Fech del Lance"; 251 exMs>Cells [1, 2] = "Fech del Lactura"; 254 exMs>Cells [22, 4] = "; 255 | 518 | exWs - 2Cells[4, 4] = , exWs - 2Cells[5, 2] = "Estado": |
| <pre>sws->cells[6, 2] = "Corte"; exws->cells[6, 4] = ""; exws->cells[7, 4] = ""; exws->cells[7, 4] = ""; exws->cells[8, 4] = ""; exws->cells[8, 4] = ""; exws->cells[9, 4] = ""; exws->cells[9, 4] = ""; exws->cells[11, 4] = "; exws->cells[12, 2] = "Lectura"; exws->cells[12, 2] = "Campaña"; exws->cells[12, 2] = "Barco"; exws->cells[13, 2] = "Barco"; exws->cells[14, 2] = "N° de Lance"; exws->cells[15, 2] = "Profundidad (m)"; exws->cells[15, 2] = "Profundidad (m)"; exws->cells[16, 4] = ""; exws->cells[17, 4] = ""; exws->cells[16, 4] = ""; exws->cells[17, 4] = "Tipo de Peso"; exws->cells[17, 4] = "Tipo de Peso"; exws->cells[18, 4] = ""; exws->cells[17, 4] = ""; exws->cells[17, 4] = ""; exws->cells[17, 2] = "Longitud Total (mm)"; exws->cells[19, 2] = "Longitud Total (mm)"; exws->cells[22, 4] = "Wreth de Lance"; exws->cells[22, 4] = ""; exws->cells[22, 2] = "Numero de Lecturas"; exws->cells[22, 2] = "Numero de Lecturas"; exws->cells[22, 2] = "Numero de Lecturas"; exws->cells[22, 4] = ""; exws->cells[22, 4] = ""; exws->cells[23, 4] = "x" + dlgCalib->Cuclar; exws->cells[3, 6] = "Coclar"; exws->cells[4, 6] = "Coclar"; exws->cells[5, 6] = "Muettos"; exws->cells[5, 6] = "Muettos"; exws->cells[5, 6] = "Unidades"; exws->cells[6, 6] = "Muettos") exws->cells[6, 6] = "Muettos") exws->cells[6, 6] = "Muettos") exws->cells[6, 6] = "Muettos") exw</pre> | 519 | exWs -> Cells[5, 4] = ""; |
| 521 exWs->Cells[7, 4] = ""; 522 exWs->Cells[7, 2] = "Otolito"; 523 exWs->Cells[7, 4] = ""; 524 exWs->Cells[7, 4] = ""; 525 exWs->Cells[8, 4] = ""; 526 exWs->Cells[9, 4] = ""; 527 exWs->Cells[1, 2] = "Cddigo"; 528 exWs->Cells[1, 4] = ""; 529 exWs->Cells[1, 4] = ""; 530 exWs->Cells[1, 4] = ""; 531 exWs->Cells[1, 4] = ""; 532 exWs->Cells[1, 4] = ""; 533 exWs->Cells[1, 4] = ""; 534 exWs->Cells[1, 4] = ""; 535 exWs->Cells[1, 4] = ""; 536 exWs->Cells[1, 4] = ""; 537 exWs->Cells[1, 4] = ""; 538 exWs->Cells[1, 2] = "Peoha del Lance"; 539 exWs->Cells[1, 2] = "Tipo de Peso"; 541 exWs->Cells[1, 2] = "longitud Total (mm)"; 542 exWs->Cells[1, 2] = "Longitud Total (mm)"; 544 exWs->Cells[2], 2] = "Wimmero de Lecturas"; 545 exWs->Cells[2], 4] = ""; 546 exWs->Cells[2], 4] = ""; 547 exWs->Cells[2], 4] = "" | 520 | exWs->Cells[6, 2] = "Corte"; |
| <pre>exMs->Cells[7, 2] = "Otolito"; exMs->Cells[8, 2] = "Especie"; exMs->Cells[8, 2] = "Especie"; exMs->Cells[8, 2] = "Lectura"; exMs->Cells[9, 2] = "Lectura"; exMs->Cells[11, 2] = "Cddigo"; exMs->Cells[11, 2] = "Cddigo"; exMs->Cells[12, 2] = "Campafa"; exMs->Cells[12, 2] = "Campafa"; exMs->Cells[13, 2] = "Barco"; exMs->Cells[14, 2] = "N* de Lance"; exMs->Cells[15, 2] = "Profundidad (m)"; exMs->Cells[15, 2] = "Profundidad (m)"; exMs->Cells[15, 2] = "Profundidad (m)"; exMs->Cells[16, 2] = "Fecha del Lance"; exMs->Cells[16, 2] = "Fecha del Lance"; exMs->Cells[17, 4] = ""; exMs->Cells[17, 4] = ""; exMs->Cells[17, 4] = ""; exMs->Cells[17, 4] = ""; exMs->Cells[18, 4] = ""; exMs->Cells[19, 4] = ""; exMs->Cells[22, 2] = "Longitud Total (mm)"; exMs->Cells[22, 4] = ""; exMs->Cells[22, 4] = ""; exMs->Cells[23, 4] = ""; exMs->Cells[24, 4] = ""; exMs->Cells[25, 4] = "Coular"; exMs->Cells[25, 6] = "Doiservaciones"; exMs->Cells[25, 6] = "Coular"; exMs->Cells[25, 6] = "Coular"; exMs->Cells[25, 6] = "Microscopio"; exMs->Cells[25, 6] = "Coular"; exMs->Cells[25, 6] = "Microscopio"; exMs->Cells[25, 6] = "X" + digCalib->Cular; exMs->Cells[25, 6] = "X" + digCalib->Cular; exMs->Cells[25, 6] = "X" + digCalib->Cular; exMs->Cells[26, 6] = "Microscopio"; exMs->Cells[27, 6] = "Microscopio"; exMs->Cells[27, 6] = "Microscopio"; exMs->Cells[27, 6] = "Microscopio"; exMs->Cells[27, 6] = "Microscopio";</pre> | 521 | exWs->Cells[6, 4] = ""; |
| <pre>exWs->Cells[7, 4] = ""; exWs->Cells[8, 4] = "Especie"; exWs->Cells[8, 4] = ""; exWs->Cells[9, 4] = ""; exWs->Cells[9, 4] = ""; exWs->Cells[9, 4] = ""; exWs->Cells[11, 2] = "Campaña"; exWs->Cells[11, 2] = "Campaña"; exWs->Cells[12, 2] = "Campaña"; exWs->Cells[12, 2] = "Barco"; exWs->Cells[13, 2] = "Barco"; exWs->Cells[14, 4] = ""; exWs->Cells[14, 4] = ""; exWs->Cells[15, 4] = ""; exWs->Cells[15, 4] = ""; exWs->Cells[15, 4] = ""; exWs->Cells[16, 4] = ""; exWs->Cells[16, 4] = ""; exWs->Cells[17, 2] = "Tipo de Lance"; exWs->Cells[17, 2] = "Tipo de Peso"; exWs->Cells[17, 2] = "Tipo de Peso"; exWs->Cells[16, 4] = ""; exWs->Cells[17, 2] = "Tipo de Peso"; exWs->Cells[17, 2] = "Tipo de Peso"; exWs->Cells[18, 2] = "Peso (gr) "; exWs->Cells[19, 4] = ""; exWs->Cells[19, 4] = ""; exWs->Cells[19, 4] = ""; exWs->Cells[21, 4] = ""; exWs->Cells[21, 4] = ""; exWs->Cells[22, 2] = "Numero de Lectura"; exWs->Cells[23, 2] = "Investigador"; exWs->Cells[23, 2] = "Investigador"; exWs->Cells[23, 2] = "Observaciones"; exWs->Cells[25, 2] = "Observaciones"; exWs->Cells[25, 4] = ""; i impainInGral = false; i { for exWs->Cells[4, 6] = "wicroscopio"; exWs->Cells[5, 6] = "Ocular"; exWs->Cells[5, 6] = "Cocular"; exWs->Cells[5, 6] = "Cocular"; exWs->Cells[5, 6] = "Wicroscopio"; exWs->Cells[5, 6] = "Wicroscopio"; exWs->Cells[5, 6] = "X" + dlgCalib->Cular; exWs->Cells[6, 8] = "X" + dlgCalib->Cular; exWs->Cells[7, 6] = "Hinetros") exWs->Cells[8, 6] = "Unidades; exWs->Cells[8, 6] = "Unidades; exWs->Cells[8, 6] = "X" + dlgCalib->Inxidades; exWs->Cells[8, 6] = "Unidades"; exWs->Cells[8, 6] = "Unidades"; exWs-</pre> | 522 | exWs->Cells[7, 2] = "Otolito"; |
| 525 exWs->Cells[8, 2] = "Especie"; 525 exWs->Cells[9, 2] = "Lectura"; 526 exWs->Cells[9, 4] = ""; 527 exWs->Cells[11, 2] = "Código"; 528 exWs->Cells[12, 2] = "Código"; 529 exWs->Cells[12, 2] = "Código"; 530 exWs->Cells[12, 2] = "Codigo"; 531 exWs->Cells[12, 2] = "Barco"; 532 exWs->Cells[13, 2] = "Barco"; 533 exWs->Cells[14, 4] = ""; 534 exWs->Cells[15, 2] = "Profundidad (m)"; 535 exWs->Cells[15, 2] = "Profundidad (m)"; 536 exWs->Cells[16, 2] = "Fecha del Lance"; 537 exWs->Cells[16, 2] = "Fecha del Lance"; 538 exWs->Cells[17, 2] = "Tipo de Peso"; 540 exWs->Cells[17, 2] = "Tipo de Peso"; 541 exWs->Cells[17, 2] = "Longitud Total (mm)"; 542 exWs->Cells[19, 2] = "Longitud Total (mm)"; 544 exWs->Cells[19, 2] = "Longitud Total (mm)"; 545 exWs->Cells[22, 2] = "Numero de Lectura"; 546 exWs->Cells[22, 2] = "Numero de Lectura"; 547 exWs->Cells[23, 4] = ""; 548 exWs->Cells[23, 2] = "Investigador"; < | 523 | exWs->Cells[7, 4] = ""; |
| <pre>255 266 277 288 287 288 287 299 298 299 2088 299 2088 2019</pre> | 524 | <pre>exWs->Cells[8, 2] = "Especie";</pre> |
| 526 exWs->Cells[9, 2] = "Lectura"; 527 exWs->Cells[1, 2] = ""; 528 exWs->Cells[11, 2] = "Campaña"; 529 exWs->Cells[12, 2] = ""; 530 exWs->Cells[12, 2] = "Barco"; 531 exWs->Cells[13, 2] = "Barco"; 532 exWs->Cells[14, 2] = "N° de Lance"; 533 exWs->Cells[14, 2] = "N° de Lance"; 534 exWs->Cells[15, 2] = "Profundidad (m)"; 535 exWs->Cells[16, 4] = ""; 536 exWs->Cells[16, 4] = ""; 537 exWs->Cells[17, 2] = "Topode Peso"; 548 exWs->Cells[17, 2] = "Toigo de Peso"; 541 exWs->Cells[18, 2] = "Peso (gr)"; 542 exWs->Cells[18, 2] = "Peso (gr)"; 543 exWs->Cells[19, 2] = "Longitud Total (mm)"; 544 exWs->Cells[21, 2] = "Fecha de la Lectura"; 545 exWs->Cells[22, 2] = "Número de Lecturas"; 546 exWs->Cells[22, 2] = "Número de Lecturas"; 547 exWs->Cells[23, 2] = "Investigador"; 548 exWs->Cells[23, 2] = "Número des"; 559 exWs->Cells[25, 2] = "Observaciones"; 551 exWs->Cells[25, 2] = "Observaciones"; <t< td=""><td>525</td><td>exWs->Cells[8, 4] = "";</td></t<> | 525 | exWs->Cells[8, 4] = ""; |
| 527 exWs>>Cells[1, 2] = "Código"; 528 exWs>>Cells[11, 2] = "Codigo"; 530 exWs>>Cells[12, 2] = "Campaña"; 531 exWs>>Cells[12, 2] = "Campaña"; 532 exWs>>Cells[13, 2] = "Barco"; 533 exWs>>Cells[14, 2] = "N° de Lance"; 534 exWs>>Cells[14, 4] = ""; 535 exWs>>Cells[15, 4] = ""; 536 exWs>>Cells[15, 4] = ""; 537 exWs>>Cells[16, 2] = "Percha del Lance"; 538 exWs>>Cells[17, 4] = ""; 539 exWs>>Cells[17, 2] = Tipo de Peso"; 541 exWs>>Cells[17, 4] = ""; 542 exWs>>Cells[17, 2] = Thopid de Total (mn)"; 543 exWs>>Cells[19, 2] = Tongitud Total (mn)"; 544 exWs>>Cells[21, 2] = "Nimero de Lectura"; 545 exWs>>Cells[22, 2] = "Nimero de Lecturas"; 546 exWs>>Cells[23, 2] = "Observaciones"; 557 exWs>>Cells[23, 2] = "Investigador"; 558 sws>>Cells[25, 2] = "Observaciones"; <td>526</td> <td><pre>exWs->Cells[9, 2] = "Lectura";</pre></td> | 526 | <pre>exWs->Cells[9, 2] = "Lectura";</pre> |
| 228 exws=>Cells[11, 2] = "Codigo"; 330 exws=>Cells[12, 2] = ""; 331 exws=>Cells[12, 2] = "Barco"; 333 exws=>Cells[13, 2] = "Barco"; 334 exws=>Cells[13, 2] = "We de Lance"; 335 exws=>Cells[14, 2] = "We de Lance"; 336 exws=>Cells[14, 4] = ""; 337 exws=>Cells[14, 4] = ""; 338 exws=>Cells[16, 4] = ""; 339 exws=>Cells[17, 2] "Tipo de Peso"; 339 exws=>Cells[17, 4] = ""; 341 exws=>Cells[18, 2] = "Teopitud Total (mm)"; 342 exws=>Cells[19, 2] "Toopitud Total (mm)"; 343 exws=>Cells[14, 4] = ""; 344 exws=>Cells[21, 2] = "Teopitud Total (mm)"; 344 exws=>Cells[21, 4] = ""; 344 exws=>Cells[21, 4] = ""; 345 exws=>Cells[22, 4] = ""; 346 exws=>Cells[22, 4] = ""; 347 exws=>Cells[25, 2] = "Observaciones"; 348 exws=>Cells[25, 2] </td <td>527</td> <td>exWs->Cells[9, 4] = "";</td> | 527 | exWs->Cells[9, 4] = ""; |
| <pre>exWs=>Cells[12, 4] = ", maintoing of the system of th</pre> | 528 520 | exws -> Cells[11, 2] = "Coalgo"; |
| 331 exNs->Cells[12, 2] = ""; 332 exNs->Cells[13, 2] = "Barco"; 333 exNs->Cells[13, 2] = "Barco"; 334 exNs->Cells[14, 2] = "N° de Lance"; 335 exNs->Cells[14, 2] = "N° de Lance"; 336 exNs->Cells[15, 2] = "Profundidad (m)"; 337 exNs->Cells[16, 2] = "Precha del Lance"; 338 exNs->Cells[17, 2] = "Tipo de Peso"; 339 exNs->Cells[17, 2] = "Tipo de Peso"; 344 exNs->Cells[17, 2] = "Tipo de Peso"; 341 exNs->Cells[18, 2] = "Pecha del Lance"; 342 exNs->Cells[18, 2] = "Tipo de Peso"; 344 exNs->Cells[18, 2] = "Tipo de Peso"; 344 exNs->Cells[19, 2] = "Tipo de Lance"; 344 exNs->Cells[19, 2] = "Toogitud Total (mm)"; 345 exNs->Cells[21, 2] = "Nomero de Lectura"; 344 exNs->Cells[22, 2] = Nimero de Lectura"; 345 exNs->Cells[23, 4] = ""; 346 exNs->Cells[23, 4] = ""; 357 exNs->Cells[25, 2] | 530 | exWs - 2Cells[11, 4] = 7 |
| <pre>332 exWs->Cells[13, 2] = "Barco"; 333 exWs->Cells[13, 4] = ""; 334 exWs->Cells[14, 4] = ""; 335 exWs->Cells[15, 2] = "Profundidad (m)"; 337 exWs->Cells[15, 2] = "Profundidad (m)"; 338 exWs->Cells[16, 2] = "Pecha del Lance"; 339 exWs->Cells[16, 2] = "Fecha del Lance"; 339 exWs->Cells[16, 2] = "Tipo de Peso"; 341 exWs->Cells[17, 4] = ""; 342 exWs->Cells[17, 4] = ""; 343 exWs->Cells[18, 2] = "Peco (gr)"; 343 exWs->Cells[19, 2] = "Longitud Total (mm)"; 345 exWs->Cells[19, 2] = "Longitud Total (mm)"; 346 exWs->Cells[21, 4] = ""; 348 exWs->Cells[22, 2] = "Número de Lectura"; 349 exWs->Cells[22, 4] = ""; 348 exWs->Cells[23, 4] = ""; 350 exWs->Cells[23, 4] = ""; 351 exWs->Cells[23, 4] = ""; 352 exWs->Cells[25, 2] = "Observaciones"; 353 exWs->Cells[25, 4] = ""; 354 limpiarInfGral = false; 355 } 355 // /s i ya se ha realizado la calibracion 366 if (listoCalib) 377 // si ya se ha realizado la calibracion 388 if (listoCalib) 359 { 356 // si ya se ha realizado la calibracion 357 // si ya se ha realizado la calibracion 358 exWs->Cells[2, 6] = "Microscopio"; 359 exWs->Cells[2, 6] = "Ocular"; 350 exWs->Cells[2, 6] = "Ocular"; 351 exWs->Cells[4, 6] = "Ccular"; 352 exWs->Cells[5, 6] = "Objetivo"; 353 exWs->Cells[5, 6] = "Objetivo"; 354 exWs->Cells[5, 6] = "Dipietivo; 355 exWs->Cells[6, 8] = "x" + dlgCalib->Objetivo; 356 exWs->Cells[7, 6] = "Pixeles medidos"; 357 exWs->Cells[7, 6] = "Pixeles; 358 exWs->Cells[7, 6] = "Dicidades"; 359 exWs->Cells[7, 6] = "Dicidades"; 350 exWs->Cells[8, 8] = dlgCalib->Lumentos; 351 exWs->Cells[8, 6] = "Milimetros") 352 exWs->Cells[9, 6] = "Micrometro (mm)"; 353 exWs->Cells[9, 6] = "Micrometro (mm)"; 354 exWs->Cells[9, 6] = "Micrometro (mm)"; 355 exWs->Cells[9, 6] = "Micrometro (mm)"; 356 exWs->Cells[9, 6] = "Micrometro (mm)"; 357 exWs->Cells[9, 6] = "Micrometro (mm)"; 358 exWs->Cells[9, 6] = "Micrometro (mm)"; 359 exWs->Cells[9, 6] = "Micrometro (mm)"; 350 exWs->Cells[9, 6] = "Micrometro (mm)"; 351 exWs->Cells[9, 6] =</pre> | 531 | exWs > Cells[12, 2] $campana ,$ |
| <pre>533</pre> | 532 | exWs->Cells[13, 2] = "Barco"; |
| <pre>534 535 exWs->Cells[14, 2] = "N° de Lance"; exWs->Cells[14, 4] = ""; 536 exWs->Cells[15, 4] = ""; 537 exWs->Cells[16, 2] = "Profundidad (m)"; 538 exWs->Cells[16, 2] = "Profundidad (m)"; 539 exWs->Cells[16, 2] = "Profunded el Lance"; 540 exWs->Cells[17, 2] = "Tipo de Peso"; 541 exWs->Cells[17, 4] = ""; 542 exWs->Cells[18, 4] = ""; 543 exWs->Cells[19, 2] = "Longitud Total (mm)"; 545 exWs->Cells[21, 2] = "Profunded el a Lectura"; 547 exWs->Cells[22, 4] = ""; 548 exWs->Cells[22, 4] = ""; 549 exWs->Cells[22, 2] = "Número de Lecturas"; 549 exWs->Cells[22, 2] = "Número de Lecturas"; 549 exWs->Cells[25, 2] = "Observaciones"; 551 exWs->Cells[25, 4] = ""; 552 for exWs->Cells[25, 4] = ""; 553 for exWs->Cells[26, 4] = ""; 554 for exWs->Cells[27, 4] = ""; 555 for exWs->Cells[27, 4] = ""; 556 for exWs->Cells[28, 4] = ""; 557 for exWs->Cells[29, 4] = ""; 558 for exWs->Cells[20, 4] = ""; 559 for exWs->Cells[20, 4] = ""; 550 for exWs->Cells[20, 4] = ""; 551 exWs->Cells[20, 4] = ""; 552 for exWs->Cells[20, 4] = "Wicroscopio"; 553 exWs->Cells[20, 6] = "Microscopio"; 554 exWs->Cells[20, 6] = "Microscopio"; 555 exWs->Cells[20, 6] = "X" + dlgCalib->Cular; 564 exWs->Cells[20, 6] = "X" + dlgCalib->Digetivo; 565 exWs->Cells[20, 6] = "x" + dlgCalib->Digetivo; 566 exWs->Cells[20, 6] = "x" + dlgCalib->Aumentos; 567 exWs->Cells[20, 6] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[20, 6] = "Ximentos"; 569 exWs->Cells[20, 6] = "Ximentos"; 560 exWs->Cells[20, 6] = "Micrometros") exWs->Cells[20, 6] = "Micrometros") exWs->Cells[20</pre> | 533 | exWs->Cells[13, 4] = ""; |
| <pre>sign = exWs->Cells[14, 4] = ""; exWs->Cells[15, 2] = "Profundidad (m)"; exWs->Cells[15, 4] = ""; exWs->Cells[16, 4] = ""; exWs->Cells[17, 2] = "Tipo de Peso"; exWs->Cells[17, 4] = ""; exWs->Cells[17, 4] = ""; exWs->Cells[18, 4] = ""; exWs->Cells[19, 2] = "Peso (gr)"; exWs->Cells[19, 2] = "Longitud Total (mm)"; exWs->Cells[19, 2] = "Fecha de la Lectura"; exWs->Cells[21, 4] = ""; exWs->Cells[21, 4] = ""; exWs->Cells[22, 2] = "Número de Lecturas"; exWs->Cells[23, 2] = "Investigador"; exWs->Cells[23, 4] = ""; exWs->Cells[25, 4] = ""; exWs->Cells[25, 4] = ""; for exWs->Cells[25, 4] = ""; exWs->Cells[25, 4] = ""; for exWs->Cells[25, 4] = ""; for exWs->Cells[25, 4] = ""; for exWs->Cells[25, 4] = ""; for exWs->Cells[26, 4] = ""; for exWs->Cells[26, 4] = ""; for exWs->Cells[27, 4] = ""; for exWs->Cells[26, 4] = "Coular"; for exWs->Cells[26, 4] = "Coular"; for exWs->Cells[26, 4] = "Coular"; for exWs->Cells[26, 6] = "Microscopio"; for exWs->Cells[26, 6] = "X" + dlgCalib->Ocular; exWs->Cells[26, 6] = "Coular"; for exWs->Cells[26, 6] = "X" + dlgCalib->Ocular; for exWs->Cells[26, 6] = "Aumentos"; for exWs->Cells[26, 6] = "Aumentos"; for exWs->Cells[26, 6] = "Aumentos"; for exWs->Cells[26, 6] = "Aumentos"; for exWs->Cells[27, 6] = "Pixeles medidos"; for exWs->Cells[26, 6] = "Digetivo"; for exWs->Cells[26, 6] = "Aumentos"; for exWs->Cells[27, 6] = "Pixeles medidos"; for exWs->Cells[27, 6] = "Dicdets"; for exWs->Cells[27, 6] = "Micrometro (mm)"; for exWs->Cells[27, 6] = "Micrometro (mm)"; for exWs->Cells[27, 6] = "Micrometro (mm)"; for exWs->Cells[27, 6] = "Microm</pre> | 534 | exWs->Cells[14, 2] = "N° de Lance"; |
| <pre>set = set = s</pre> | 535 | exWs->Cells[14, 4] = ""; |
| <pre>style="text-align: cextual;" style=""; style="text-align: cextual;" style=""; style="textual;" style="t</pre> | 536 | exWs->Cells[15, 2] = "Profundidad (m)"; |
| <pre>state = state = s</pre> | 537 | exWs->Cells[15, 4] = ""; |
| <pre>539 exws->Cells[16, 4] = ""; 540 exws->Cells[17, 2] = "Tipo de Peso"; 541 exws->Cells[17, 4] = ""; 542 exws->Cells[18, 2] = "Peso (gr)"; 543 exws->Cells[19, 2] = "Longitud Total (mm)"; 544 exws->Cells[19, 4] = ""; 545 exws->Cells[21, 2] = "Fecha de la Lectura"; 547 exws->Cells[22, 2] = "Número de Lecturas"; 548 exws->Cells[22, 2] = "Número de Lecturas"; 549 exws->Cells[22, 2] = "Investigador"; 551 exws->Cells[23, 2] = "Investigador"; 552 exws->Cells[25, 2] = "Observaciones"; 553 exws->Cells[25, 4] = ""; 554 limpiarInfGral = false; 555 } 556 // si ya se ha realizado la calibracion 558 if (listoCalib) 559 { 560 // cargamos los datos 561 exws->Cells[2, 6] = "Microscopio"; 562 exws->Cells[4, 6] = "Ocular"; 563 exws->Cells[4, 6] = "Ocular"; 564 exws->Cells[5, 6] = "Microscopio"; 565 exws->Cells[5, 6] = "Microscopio"; 566 exws->Cells[5, 6] = "Microscopio"; 567 exws->Cells[5, 6] = "Dipetivo"; 568 exws->Cells[5, 6] = "Cular"; 569 exws->Cells[5, 6] = "x" + dlgCalib->Cular; 564 exws->Cells[5, 6] = "Aumentos"; 565 exws->Cells[6, 6] = "Aumentos"; 566 exws->Cells[7, 6] = "ix" + dlgCalib->Aumentos; 567 exws->Cells[7, 6] = "ixeles medidos"; 568 exws->Cells[7, 6] = "ixeles medidos"; 569 exws->Cells[7, 6] = "ixeles medidos"; 570 exws->Cells[8, 6] = "Unidades; 571 exws->Cells[8, 6] = "Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exws->Cells[9, 6] = "Micrometro (mm)"; 574 exws->Cells[9, 6] = "Micrometro (mm)"; 575 exws->Cells[9, 6] = "Micrometro (mm)"; 574 exws->Cells[9, 6] = "Micrometro (mm)"; 575 exws->Cells[9, 6] = "Micrometro (mm)"; 576 exws->Cells[9, 6] = "Micrometro (mm)"; 577 exws->Cells[9, 6] = "Micrometro (mm)"; 578 exws->Cells[9, 6] = "Micrometro (mm)"; 579 exws->Cells[9, 6] = "Micrometro (mm)"; 570 exws->Cells[9, 6] = "Micrometro (mm)"; 571 exws->Cells[9, 6] = "Micrometro (mm)"; 572 exws->Cells[9, 6] = "Micrometro (mm)"; 573 exws->Cells[9, 6] = "Micrometro (mm)"; 574 exws->Cells[9, 6] = "Micrometro (mm)"; 575 exws->Cells[9, 6] = "Micrometro (mm)"; 576 exws->Cells[9, 6]</pre> | 538 | exWs->Cells[16, 2] = "Fecha del Lance"; |
| 340 exws->Cells[17, 4] = "Tipo de Peso"; 541 exws->Cells[17, 4] = ""; 542 exws->Cells[18, 4] = ""; 543 exws->Cells[19, 4] = ""; 544 exws->Cells[19, 4] = ""; 545 exws->Cells[21, 2] = "Fecha de la Lectura"; 546 exws->Cells[21, 4] = ""; 547 exws->Cells[22, 2] = "Número de Lecturas"; 548 exws->Cells[22, 4] = ""; 549 exws->Cells[23, 2] = "Investigador"; 550 exws->Cells[25, 2] = "Observaciones"; 551 exws->Cells[25, 4] = ""; 552 exws->Cells[25, 4] = ""; 553 exws->Cells[25, 4] = ""; 554 limpiarInfGral = false; 555 } 556 // si ya se ha realizado la calibracion 561 exws->Cells[2, 6] = "Microscopio"; 552 exws->Cells[2, 6] = "Coular"; 553 exws->Cells[4, 8] = "x" + dlgCalib->Ocular; 554 exws->Cells[5, 6] = "Objetivo"; 555 ; 566 // cargamos los datos 561 exws->Cells[5, 6] = "Ocular"; 562 exws->Cells[5, 6] = "Cularout"; | 539 | exWs->Cells[16, 4] = ""; |
| 542 exWs->Cells[18, 2] = "Peso (gr)"; 543 exWs->Cells[18, 2] = "Longitud Total (mm)"; 544 exWs->Cells[19, 2] = "Longitud Total (mm)"; 545 exWs->Cells[19, 4] = ""; 546 exWs->Cells[21, 2] = "Fecha de la Lectura"; 547 exWs->Cells[22, 2] = "Número de Lecturas"; 548 exWs->Cells[22, 2] = "Número de Lecturas"; 549 exWs->Cells[23, 2] = "Investigador"; 550 exWs->Cells[23, 2] = "Observaciones"; 551 exWs->Cells[25, 2] = "Observaciones"; 552 exWs->Cells[25, 4] = ""; 553 exWs->Cells[25, 4] = ""; 554 limpiarInfGral = false; 555 } 556 // si ya se ha realizado la calibracion 558 if (listoCalib) 559 { 560 // cargamos los datos 577 // si ya se ha realizado la calibracion 588 if (listoCalib) 599 { 560 // cargamos los datos 561 exWs->Cells[4, 6] = "Ccular"; 562 exWs->Cells[5, 6] = "Objetivo"; 563 exWs->Cells[5, 6] = "Wicroscopio" | 540 541 | exws->Cells[17, 2] = "Tipo de Peso"; |
| 543 exWs->Cells[18, 4] = ""; 544 exWs->Cells[19, 4] = ""; 545 exWs->Cells[19, 4] = ""; 546 exWs->Cells[21, 4] = ""; 547 exWs->Cells[21, 4] = ""; 548 exWs->Cells[22, 2] = "Número de Lecturas"; 549 exWs->Cells[22, 4] = ""; 550 exWs->Cells[23, 2] = "Investigador"; 551 exWs->Cells[25, 2] = "Observaciones"; 552 exWs->Cells[25, 4] = ""; 553 exWs->Cells[25, 4] = ""; 554 limpiarInfGral = false; 555 } 556 // si ya se ha realizado la calibracion 557 // si ya se ha realizado la calibracion 558 if (listoCalib) 559 { 560 // cargamos los datos 577 exWs->Cells[4, 6] = "Ocular"; 588 if (listoCalib] 599 { 561 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 562 exWs->Cells[5, 6] = "Objetivo"; 563 exWs->Cells[5, 6] = "Nimentos"; 564 exWs->Cells[6, 6] = "x" + dlgCalib->Aumentos; 565 | 542 | exWs - 2Cells[17, 4] = , $exWs - 2Cells[18, 2] = "Peso (ar)";$ |
| <pre>stature = "Longitud Total (mm)"; exWs=>Cells[19, 4] = "Longitud Total (mm)"; exWs=>Cells[21, 2] = "Fecha de la Lectura"; exWs=>Cells[21, 4] = ""; exWs=>Cells[22, 2] = "Número de Lecturas"; exWs=>Cells[22, 4] = ""; exWs=>Cells[23, 2] = "Investigador"; exWs=>Cells[23, 2] = "Investigador"; exWs=>Cells[25, 2] = "Observaciones"; exWs=>Cells[25, 2] = "Observaciones"; exWs=>Cells[25, 4] = ""; limpiarInfGral = false; // si ya se ha realizado la calibracion if (listoCalib) { // cargamos los datos exWs=>Cells[2, 6] = "Microscopio"; exWs=>Cells[4, 6] = "Ocular"; exWs=>Cells[5, 6] = "Objetivo"; exWs=>Cells[5, 6] = "Dipietivo"; seXw=>Cells[5, 6] = "Dipietivo"; seXw=>Cells[5, 6] = "Sumentos"; seXw=>Cells[6, 8] = "x" + dlgCalib=>Objetivo; exWs=>Cells[7, 6] = "Pixeles medidos"; exWs=>Cells[7, 6] = "Pixeles medidos"; seXw=>Cells[8, 6] = "Unidades"; exWs=>Cells[8, 6] = "Unidades; if (dlgCalib=>Unidades == "Milimetros") exWs=>Cells[8, 6] = "Micrometro (mm)"; exWs=>Cells[9, 6] = "Micrometro (mm)";</pre> | 543 | exWs -> Cells[18, 4] = ""; |
| <pre>545 546 546 547 548 548 549 549 549 550 550 551 551 552 552 553 553 554 555 555 555 555 555 555 556 557 557 558 556 557 559 559 550 559 550 559 550 550 551 555 555 555 555 555 555 555</pre> | 544 | exWs->Cells[19, 2] = "Longitud Total (mm)"; |
| <pre>546 547 548 648 649 649 649 640 640 640 640 640 640 640 640</pre> | 545 | exWs->Cells[19, 4] = ""; |
| <pre>547 548 649 649 649 640 640 640 640 640 640 640 640</pre> | 546 | <pre>exWs->Cells[21, 2] = "Fecha de la Lectura";</pre> |
| <pre>548 649 648 649 649 649 649 649 649 649 649 649 649</pre> | 547 | exWs->Cells[21, 4] = ""; |
| <pre>549 exWs->Cells[22, 4] = ""; 550 exWs->Cells[23, 4] = "Investigador"; exWs->Cells[23, 4] = ""; 551 exWs->Cells[25, 4] = "Observaciones"; exWs->Cells[25, 4] = ""; 554 limpiarInfGral = false; 555 } 556 557 // si ya se ha realizado la calibracion if (listoCalib) 559 { 760 // cargamos los datos exWs->Cells[2, 6] = "Microscopio"; 661 exWs->Cells[2, 6] = "Ocular"; 562 exWs->Cells[4, 6] = "Ocular"; 563 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; exWs->Cells[5, 6] = "Objetivo"; 655 exWs->Cells[5, 6] = "Aumentos"; 566 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades;; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") exWs->Cells[9, 6] = "Micrómetro (mm)"; 674 exWs->Cells[9, 6] = "Micrómetro (mm)"; 675 exWs->Cells[9, 6] = "Micrómetro (mm)"; 674 exWs->Cells[9, 6] = "Micrómetro (mm)"; 675 exWs->Cells[9, 6] = "Micrómetro (mm)"; 674 exWs->Cells[9, 6] = "Micrómetro (mm)"; 675 exWs->Cells[9, 6] = "Micrómetro (mm)"; 676 exWs->Cells[9, 6] = "Micrómetro (mm)"; 677 exWs->Cells[9, 6] = "Micrómetro (mm)"; 678 exWs->Cells[9, 6] = "Micrómetro (mm)"; 679 exWs->Cells[9, 6] = "Micrómetro (mm)"; 674 exWs->Cells[9, 6] = "Micrómetro (mm)"; 674 exWs->Cells[9, 6] = "Micrómetro (mm)"; 675 675 675 675 675 675 675 675</pre> | 548 | exWs->Cells[22, 2] = "Número de Lecturas"; |
| <pre>sso exws->Cells[23, 2] = "Investigador"; exWs->Cells[23, 4] = ""; exWs->Cells[25, 2] = "Observaciones"; exWs->Cells[25, 4] = ""; limpiarInfGral = false; sso // si ya se ha realizado la calibracion if (listoCalib) for // cargamos los datos exWs->Cells[2, 6] = "Microscopio"; exWs->Cells[2, 6] = "Microscopio"; exWs->Cells[4, 6] = "Ocular"; so exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; exWs->Cells[5, 6] = "Objetivo"; exWs->Cells[5, 6] = "Wojetivo"; se exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; exWs->Cells[6, 6] = "Aumentos"; so exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; se exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; se exWs->Cells[7, 6] = "Pixeles medidos"; se exWs->Cells[7, 8] = dlgCalib->Pixeles; sr exWs->Cells[8, 8] = dlgCalib->Unidades; if (dlgCalib->Unidades == "Milimetros") exWs->Cells[9, 6] = "Micrómetro (mm)"; sta</pre> | 549 | exWs->Cells[22, 4] = ""; |
| <pre>S51 S52 s53 s53 s54 s554 s554 s555 s55 s55 s55 s55 s55</pre> | 55U 551 | exws->Cells[23, 2] = "Investigador"; |
| <pre>status > Cells[25, 4] = ""; status > Cells[25, 4] = ""; limpiarInfGral = false; status =</pre> | 552 | exWs - 2Cells[25, 4] = 0 |
| <pre>1</pre> | 553 | exWs -> Cells[25, 4] = ""; |
| <pre>555 } 556 // si ya se ha realizado la calibracion 558 if (listoCalib) 559 { 560 // cargamos los datos 561 exWs->Cells[2, 6] = "Microscopio"; 562 exWs->Cells[4, 6] = "Ocular"; 563 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 564 exWs->Cells[5, 6] = "Objetivo"; 565 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 6] = "X" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") exWs->Cells[9, 6] = "Micrómetro (mm)"; 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574</pre> | 554 | limpiarInfGral = false; |
| <pre>556 557 // si ya se ha realizado la calibracion 558 if (listoCalib) 559 { 560 // cargamos los datos 561 exWs->Cells[2, 6] = "Microscopio"; 562 exWs->Cells[4, 6] = "Ocular"; 563 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 564 exWs->Cells[5, 6] = "Objetivo"; 565 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574</pre> | 555 | } |
| <pre>557</pre> | 556 | |
| <pre>558 if (listoCalib) 559 { 560 // cargamos los datos 561 exWs->Cells[2, 6] = "Microscopio"; 562 exWs->Cells[4, 6] = "Ocular"; 563 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 564 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 565 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574</pre> | 557 | // si ya se ha realizado la calibracion |
| <pre>559 { // cargamos los datos exWs->Cells[2, 6] = "Microscopio"; exWs->Cells[4, 6] = "Ocular"; exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; exWs->Cells[5, 6] = "Objetivo"; f64 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; exWs->Cells[6, 6] = "Aumentos"; exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; exWs->Cells[7, 6] = "Pixeles medidos"; exWs->Cells[7, 8] = dlgCalib->Pixeles; exWs->Cells[8, 6] = "Unidades; if (dlgCalib->Unidades == "Milimetros") exWs->Cells[9, 6] = "Micrómetro (mm)"; exWs->Cells[9, 6] = "Micrómetro (mm)"; </pre> | 558 | if (listoCalib) |
| <pre>560 // cargamos los datos 561 exWs->Cells[2, 6] = "Microscopio"; 562 exWs->Cells[4, 6] = "Ocular"; 563 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 564 exWs->Cells[5, 6] = "Objetivo"; 565 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574</pre> | 559 | |
| 561 exws->Cells[2, 6] = "Microscopio"; 562 exws->Cells[4, 6] = "Ocular"; 563 exws->Cells[4, 8] = "x" + dlgCalib->Ocular; 564 exws->Cells[5, 6] = "Objetivo"; 565 exws->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exws->Cells[6, 6] = "Aumentos"; 567 exws->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exws->Cells[7, 6] = "Pixeles medidos"; 569 exws->Cells[7, 8] = dlgCalib->Pixeles; 570 exws->Cells[8, 6] = "Unidades"; 571 exws->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exws->Cells[9, 6] = "Micrómetro (mm)"; | 560 | // cargamos los datos |
| 562 exWs->Cells[4, 8] = "x" + dlgCalib->Ocular; 563 exWs->Cells[5, 6] = "Objetivo"; 564 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 565 exWs->Cells[6, 6] = "Aumentos"; 566 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | ンや上 ちんつ | exws - 2cells[2, 0] = "Mlcroscopio"; $evws - 2cells[4, 6] = "Couler";$ |
| 564 exWs->Cells[5, 6] = "Objetivo"; 565 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | 563 | $e_{XWS} \rightarrow Ce_{IIS} [4, 8] = "x" + d_{I}aCalib \rightarrow Coular$ |
| 565 exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; 566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | 564 | $exWs \rightarrow Cells[5, 6] = "Objetivo";$ |
| <pre>566 exWs->Cells[6, 6] = "Aumentos"; 567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574 elso</pre> | 565 | exWs->Cells[5, 8] = "x" + dlgCalib->Objetivo; |
| <pre>567 exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574 elso</pre> | 566 | exWs->Cells[6, 6] = "Aumentos"; |
| 568 exWs->Cells[7, 6] = "Pixeles medidos"; 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milímetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | 567 | exWs->Cells[6, 8] = "x" + dlgCalib->Aumentos; |
| 569 exWs->Cells[7, 8] = dlgCalib->Pixeles; 570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milímetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | 568 | exWs->Cells[7, 6] = "Píxeles medidos"; |
| <pre>570 exWs->Cells[8, 6] = "Unidades"; 571 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milímetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574</pre> | 569 | exWs->Cells[7, 8] = dlgCalib->Pixeles; |
| 5/1 exWs->Cells[8, 8] = dlgCalib->Unidades; 572 if (dlgCalib->Unidades == "Milímetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; 574 | 570 | <pre>exWs->Cells[8, 6] = "Unidades";</pre> |
| 572 II (algCalLD->Unidades == "Milimetros") 573 exWs->Cells[9, 6] = "Micrómetro (mm)"; | 571 | exWs->Cells[8, 8] = dlgCalib->Unidades; |
| 574 $close = 2000 close = 1000 close = 10$ | 572 572 | <pre>ll (alguallo->Unlaades == "Milimetros")</pre> |
| | 574 | else |
| 575 exWs->Cells[9, 6] = "Micrómetro (um)"; | 575 | exWs->Cells[9, 6] = "Micrómetro (um)"; |

576 exWs->Cells[9, 8] = dlgCalib->Micrometro; 577 if (dlgCalib->Unidades == "Milímetros") exWs->Cells[10, 6] = "Relación (mm/pixel)"; 578 579 else 580 exWs->Cells[10, 6] = "Relación (um/pixel)"; 581 exWs->Cells[10, 8] = dlgCalib->Relacion; exWs->Cells[11, 6] = "Observaciones"; 582 if (dlgCalib->Observaciones == "Observaciones (opcional)") 583 584 exWs->Cells[11, 8] = ""; 585 else 586 exWs->Cells[11, 8] = dlgCalib->Observaciones; 587 } else if (limpiarCalib) // si se quiere limpiar 588 589 { 590 exWs->Cells[2, 6] = "Microscopio"; exWs->Cells[4, 6] = "Ocular"; 591 exWs->Cells[4, 8] = ""; 592 593 exWs->Cells[5, 6] = "Objetivo"; exWs->Cells[5, 8] = ""; 594 595 exWs->Cells[6, 6] = "Aumentos"; exWs->Cells[6, 8] = ""; 596 exWs->Cells[7, 6] = "Unidades"; 597 598 exWs->Cells[7, 8] = ""; exWs->Cells[8, 6] = "Micrómetro"; 599 exWs->Cells[8, 8] = ""; 600 exWs->Cells[9, 6] = "Pixeles medidos"; 601 exWs->Cells[9, 8] = ""; 602 exWs->Cells[10, 6] = "Relación (uds/pixel)"; 603 exWs->Cells[10, 8] = ""; 604 exWs->Cells[11, 6] = "Observaciones"; 605 606 } // mostramos el documento de Excel 607 608 exApp->Visible = true; 609 } 610 611 private: System::Void salirToolStripMenuItem Click(System::Object^ sender, System::EventArgs^ e) 612 { 613 // para salir System::Windows::Forms::Application::Exit(); 614 615 } 616 617 private: System::Void videoToolStripMenuItem Click(System::Object^ sender, System::EventArgs^ e) 618 { 619 // para activar el video 620 } 621 private: System::Void capturarImagenToolStripMenuItem Click(System::Object^ 622 sender, System::EventArgs^ e) 623 { 624 // para capturar una imagen 625 } 626 }; 627

Esencialmente, este Formulario Principal no es más que el telón de fondo de toda la aplicación OTOLIVE, ya que la consola permanece oculta y le ha concedido todo el control del programa, ya que simplemente lo inicia, después es el formulario el que maneja todas las funciones, como se muestra en la siguiente estructura de archivos.



Figura 22.- Orden jerárquico de los archivos del programa

Por eso, lo primero que nos encontramos en las líneas 4 y 5, son las cabeceras de los formularios secundarios, a los cuales llama gracias las líneas 39 y 43 dentro del constructor de Form_Ppal.h. Ya sólo queda declarar sus respectivas variables en las líneas 424 y 428 para poder ejecutarlos desde las líneas 437 y 447 respectivamente para Información General y para Calibrar Microscopio, por medio del comando ShowDialog() dentro de las funciones de evento de los botones que conectan con cada uno de ellos. Esta es la manera de que un formulario pueda invocar a otros.

Para estructurar el código de un formulario cualquiera atendiendo a las partes que nos interesan, podemos empezar por la "cabecera", donde ponemos todos los #include, los using namespace y los #define. Después vendría el "constructor", donde se inicializan las variables del formulario. Ahora nos encontramos con una gran cantidad de código que ha sido generado automáticamente al ir creando la interfaz del formulario, por lo que damos un gran salto hasta #pragma endregion, a partir de donde empezamos a escribir nuestro código, que es la última y más importante parte de nuestro programa.

Este código estará compuesto fundamentalmente por gran cantidad de pequeñas funciones, que son ni más ni menos que los manejadores de eventos de los componentes

de nuestro formulario (botones, cuadros de texto, botones de opción, listas desplegables, etc.). Lo que más a menudo nos vamos a encontrar, son eventos tipo "qué hacer cuando se hace clic sobre un botón", pero existen muchas más opciones y las podemos ver en la Ventana de Propiedades, en la pestaña de Eventos. Los tres eventos que hay programados son los de los botones para abrir el formulario de Información General, el de Calibrar Microscopio, y el de Guardar todo en la base de datos.

Las acciones de los botones para llamar a los formularios secundarios son iguales en estructura, ya que primero los abre, pasando a tener éstos el control de la aplicación mientras realizan sus funciones, y cuando se cierran (ya sea por el botón Aceptar, Limpiar o Cancelar), el control vuelve al Formulario Principal, y éste recibe un valor devuelto por los otros formularios al cerrarse, un resultado que nos servirá para actuar de una u otra forma. Por eso si el valor devuelto es el del botón Aceptar, significa que todos los campos del formulario secundario han sido introducidos correctamente, y se activa un flag para poder guardar esos datos en la base de datos. Si el valor devuelto proviene del botón Limpiar, se hace lo contrario, se activa un flag que borra la base de datos de ese formulario concreto. Y por último, el botón cancelar no genera ninguna acción sobre la base de datos, como es lógico. La siguiente figura muestra este concepto.



Figura 23.- Acción de Guardar/Limpiar la base de datos

La función que queda es la más importante, la del evento de pulsar el botón Guardar. Como hemos dicho, este evento reacciona de manera distinta si el valor devuelto por los formularios secundarios es el de Aceptar o el de Limpiar. Pues bien, el primero rellena los campos de la base de datos con lo que se ha introducido en los formularios, y el segundo los borra. Ya sólo queda ver cómo nos comunicamos con la base de datos.

Ya se agregó al crear el proyecto la referencia Microsoft.Office.Interop.Excel 11.0.0.0⁸, y ahora en nuestro formulario principal, hay que añadir la línea 16 en las cabeceras, la 37 en el constructor, y la 422 para definir la variable de comunicación con la base de datos. Y gracias a los conceptos aprendidos en un tutorial se puede incluir el código para preparar el documento Excel de las líneas 457 a 464. Después, lo que nos encontramos dentro de las condiciones manejadas por los flags, es el volcado de datos en estado puro, tanto almacenamiento como borrado, accediendo al contenido de las

⁸Tutorial para comunicación Excel-Visual Studio

celdas de Excel. Y finalmente en la línea 608 es donde se muestra el documento, para ser guardado posteriormente.

Antes de pasar a explicar el siguiente archivo del proyecto, hay que hacer un apunte importante, y es para hablar sobre la función IntelliSense que posee Visual Studio. Es una de las mayores ventajas para la programación, ya que al escribir nuestro código, IntelliSense nos muestra todas las posibles subclases y miembros que puede tener una variable, con todos sus parámetros de entrada y salida, etc. Por eso cuando no está disponible esta función y además en difícil encontrar información relevante en la red, se frena mucho la marcha de desarrollo en la programación.

Y se señala lo anterior porque algo como tan simple usar un #define Microsoft::Office::Interop::Excel::Application Excel para acortar código y poder escribir Excel^ exApp en lugar de lo que hay en la línea 422, provocó el que no se pudiera disponer de la ayuda de IntelliSense para las funciones de Excel durante gran parte del desarrollo del proyecto, por lo que no se pudo avanzar demasiado en conceptos necesarios como abrir documentos ya existentes para tomar datos, o seguir creando más hojas para ir almacenando la información de cada transecto, etc. Entonces, hasta que se cae en la cuenta de que algo que no debería dar ningún fallo está perjudicando al proyecto, se pierde un tiempo precioso. Queda entonces para otros desarrolladores la labor de seguir avanzando en esta rama de la comunicación con la base de datos.

50 2.4 FORMULARIO PRINCIPAL