**第4课 MFC映射机制剖析**

**1 编写针对MainFrame的mouseClick事件，将不会有反应**

在单文档中view挡在MainFrame的前面。此时如果编写针对MainFrame的mouseClick事件，将不会有反应。

**2.消息响应会在3处修改代码**

**1处是在头文件中**

//{{AFX\_MSG(CDrawView)

afx\_msg void OnLButtonDown(UINT nFlags, CPoint point);

afx\_msg void OnLButtonUp(UINT nFlags, CPoint point);

afx\_msg void OnMouseMove(UINT nFlags, CPoint point);

//}}AFX\_MSG

DECLARE\_MESSAGE\_MAP()

**另一处是cpp文件的begin MessageMap和End MessageMap之间**，

BEGIN\_MESSAGE\_MAP(CDrawView, CView)

//{{AFX\_MSG\_MAP(CDrawView)

ON\_WM\_LBUTTONDOWN()

ON\_WM\_LBUTTONUP()

ON\_WM\_MOUSEMOVE()

//}}AFX\_MSG\_MAP

// Standard printing commands

ON\_COMMAND(ID\_FILE\_PRINT, CView::OnFilePrint)

ON\_COMMAND(ID\_FILE\_PRINT\_DIRECT, CView::OnFilePrint)

ON\_COMMAND(ID\_FILE\_PRINT\_PREVIEW, CView::OnFilePrintPreview)

END\_MESSAGE\_MAP()

**最后是要有函数实现的代码。**

void CDrawView::OnLButtonDown(UINT nFlags, CPoint point)

{

// TOD Add your message handler code here and/or call default

m\_ptOrigin=m\_ptOld=point;

m\_bDraw=TRUE;

CView::OnLButtonDown(nFlags, point);

}

**3.画线**

定义一个成员变量保存mouseDown的点m\_Point,四种方法：

1)API函数方法画线用HDC

2)用CDC类成员函数画线。此时别忘记ReleaseDC

3)用CClientDC

4)用CWindowDC,用它甚至可以整个屏幕区域画线。

**方法一：API函数方法画线用HDC**

HDC hdc;

hdc=::GetDC(m\_hWnd);

MoveToEx(hdc,m\_ptOrigin.x,m\_ptOrigin.y,NULL);

LineTo(hdc,point.x,point.y);

::ReleaseDC(m\_hWnd,hdc);

**方法二：用CDC类成员函数画线。此时别忘记ReleaseDC**

CDC \*pDC=GetDC();

pDC->MoveTo(m\_ptOrigin);

pDC->LineTo(point);

ReleaseDC(pDC);

**方法三：用CClientDC**

//CClientDC dc(this);

CClientDC dc(GetParent());

dc.MoveTo(m\_ptOrigin);

dc.LineTo(point); //此处不需要ReleaseDC,因为CClientDC会自动释放DC

**方法四：用CWindowDC,用它甚至可以整个屏幕区域画线。**

CWindowDC dc(this);

//CWindowDC dc(GetParent());

//CWindowDC dc(GetDesktopWindow()); //此时可以在整个屏幕上划线

dc.MoveTo(m\_ptOrigin);

dc.LineTo(point);

**4.画笔的使用**

CPen pen(PS\_DOT,1,RGB(0,255,0)); //设置画笔

CClientDC dc(this);

CPen \*pOldPen=dc.SelectObject(&pen); //选择画笔

dc.MoveTo(m\_ptOrigin);

dc.LineTo(point);

dc.SelectObject(pOldPen);

**5.画刷的使用**

**普通画刷（画矩形，以选择的颜色填充）**

CBrush brush(RGB(255,0,0));

CClientDC dc(this);

dc.FillRect(CRect(m\_ptOrigin,point),&brush);

**位图画刷（位图填充）**

CBitmap bitmap;

bitmap.LoadBitmap(IDB\_BITMAP1);

CBrush brush(&bitmap);

CClientDC dc(this);

dc.FillRect(CRect(m\_ptOrigin,point),&brush);

**透明画刷（矩形重叠在一起不覆盖）**

CClientDC dc(this);

//CBRUSH::FromHandle是静态成员函数，所以可以用下面的方法调用。

CBrush\*pBrush=CBrush::FromHandle ((HBRUSH)GetStockObject(NULL\_BRUSH));

CBrush \*pOldBrush=dc.SelectObject (pBrush);

dc.Rectangle(CRect(m\_ptOrigin,point));

dc.SelectObject (pOldBrush);

**6 如何从句柄获得对象的指针？**

答FromHandle

**7模拟windows画图工具画图，鼠标拖到哪就画到哪**

用到OnMouseMove(UINT nFlags, CPoint point)