```
' Bill of Material (on Sheet)
'
' Changes:
'       17.02.2000 CIM-Team     Initial Version
'       31.05.2000 CIM-Team     New version
'       10.08.2002 CIM-Team     Multi language
'       10.08.2002 CIM-Team     Add additional parts and fitting parts to the
list
'       17.04.2003 CIM-Team     Add PartNumber functionality
'       30.06.2003 CIM-Team     Changes for version 2003, new calculation for
terminals
'       18.02.2004 CIM-Team     Handling of Articlenumber for Components /
Additional parts / Fitting parts
'                               Device:         1. Component - ArticleNumber
'                                               2. if empty: Entry - Name
'                                               3. if empty: Device - PartNumber
'                               AdditionalPart: 1. Component - ArticleNumber
'                                               2. if empty: Entry - Name
'                               FittingPart:    1. Component - ArticleNumber
'                                               2. if empty: Entry - Name
'       15.04.2004 CIM-Team     Changes for ORACLE
'       18.08.2004 CIM-Team     Added control of internal/external execution
'       13.03.2005 CIM-Team     Added additional device attributes for dynamic
devices
'       04.04.2005 CIM-Team Added portuguese strings
'       27.04.2005 CIM-Team [1r] Step-1182: Anschlagteile von Klemmleisten
/nicht/ verarbeiten. Sie kommen sonst doppelt...
'   28.07.2005 CIM-Team added strings for chinese and russian
'   30.10.2005 CIM-Team [2b] Step-1810: Number of elements enhanced to 20000
'   30.10.2005 CIM-Team [3b] Step-1810: Count fitting parts only, if pin is
placed
'   30.10.2005 CIM-Team [4b] Step-1469: Ignore parts of assemblies from the
database
'   30.10.2005 CIM-Team [5b] Step-1755: Additional parts on project level
'   31.10.2005 CIM-Team [6b] Step-1755: Additional parts including number of
parts in the string
'   07.07.2006 CIM-Team [7b] Scout-1001: Bug when analyzinh additional parts
'   13.11.2006 CIM-Team [8b] Scout-1001: Changing of Messages Routine
'   15.01.2007 CIM-Team [9rk] Scout-0990: Lange Betriebsmittel werden über den
Rand geschrieben
'   23.01.2007 CIM-Team [10rk] Scout-1925: Schriftbreite bei den Textausgaben
auf 'eng' setzen
'       12.03.2007 CIM-Team Added japanese version
'       10.10.2007 CIM-Team [rk] star-00017: rewritten to use new methods
'       20.11.2007 CIM-Team[1rk] star-00017: Description of sheet
'       17.01.2008 CIM-Team [rk] sun-00223: for use in viewplus
'
'       - EOH -
'...

        Option Explicit


'
------------------------------------------------------------------------------
------------------
' Global constants
'
------------------------------------------------------------------------------
------------------
        Const SHEET_FORMAT              = "DESYSTCKA3"
        Const SHEET_SYMBOL              = "SYM-BillOfMaterial"
        Const COLUMNS_PER_PAGE  =    6
        Const LINES_PER_COLUMN  =   26
        Const FREE_SYMBOL_TEXT  = 1006
        Const ATT_DESCRIPTION_1 = "SheetName1"
        Const ATT_DESCRIPTION_2 = "SheetName2"
' [1rk]
```

```
'
------------------------------------------------------------------------------
------------------
' Global variables ( for customization )
'
------------------------------------------------------------------------------
------------------
        Dim DevNamesLen:  DevNamesLen   = 55
' width of column for Devices
        Dim CompNamesLen: CompNamesLen  = 30
' width of column for Componentname
        Dim DescNamesLen: DescNamesLen  = 40
' width of column for Description


'
------------------------------------------------------------------------------
------------------
' Global Variables internal
'
------------------------------------------------------------------------------
------------------
        Dim sheetNumber: sheetNumber    = 0
        Dim ContentsId: ContentsId              = 0
        Dim FirstShtId: FirstShtId              = 0
        Dim     sheetName: sheetName            = ""
        Dim     sheetDesc: sheetDesc            = ""

        ' needed if format used ----------------
        Dim y: y                                                = 0
        Dim     y_min: y_min                            = 24
        Dim     y_max: y_max                            = 226
        Dim     y_space : y_space                       = 8
        Dim     sheetFormat: sheetFormat        = "A3-BillOfMaterial"
        Dim units, x_position, x_quantity, x_compcode, x_description,
x_supplier, x_devnames
        Dim text_height, x_ass, y_ass, x_loc, y_loc, text_height_ass_loc
        ' ---------------------------------------

'
------------------------------------------------------------------------------
------------------
' Output sheet is only sorted by Components
'
' Start sheet
Sub OutputSheet

        Debug "OutputSheet started "

        Select case language
                Case "01"
                        sheetName   = "BOM_"
                        sheetDesc       = "Bill of Material"
                Case "44"
                        sheetName   = "BOM_"
                        sheetDesc       = "Bill of Material"
                Case "49"
                        sheetName   = "Stk_"
                        sheetDesc       = "Stückliste"
                Case "33"
                        sheetName   = "BOM_"
                        sheetDesc       = "Liste des pièces"
                Case "34"
                        sheetName   = "BOM_"
                        sheetDesc       = "Lista de Materiales"
                Case "39"
                        sheetName   = "BOM_"
```

```
                sheetDesc       = "Lista materiali"
            Case "55"
                sheetName   = "LdM_"
                sheetDesc       = "Lista de Materiais"
            Case "07"
                sheetName   = "BOM_"
                sheetDesc       = "Спецификация"
            Case "86"
                sheetName   = "BOM_"
                sheetDesc       = "□□□"
            Case "90"
                sheetName   = "BOM_"
                sheetDesc       = "Bill of Material"
            Case "81"
                sheetName   = "BOM_"
                sheetDesc       = "□□□"
            Case Else
                sheetName   = "BOM_"
                sheetDesc       = "Bill of Material"
        End Select

        ' needed if format used -------------------------
        units               = "MM"
        x_position                  = 26
        x_quantity                  = 44
        x_compcode                  = 68
        x_description           = 140
        x_supplier                  = 230
        x_devnames                  = 268
        text_height                 = 4
        x_ass                       = 102
        y_ass                       = 258
        x_loc                       = 242
        y_loc                       = 258
        text_height_ass_loc     = 6

        Dim SaveMeasure: SaveMeasure       = prj.GetMeasure
        Dim SaveTextMode: SaveTextMode     = prj.GetGraphTextMode
        Dim SaveTextHeight: SaveTextHeight = prj.GetGraphTextHeight
        prj.SetMeasure units
        prj.SetGraphTextMode 2                                      ' set to 2 ==
NARROW
        prj.SetGraphTextHeight text_height
        y = 0
        ' ---------------------------------------------

        DeleteSheets sheetName                                      ' first delete
all sheets

        ' output all relevant components
        Dim tmplst: set tmplst = p.Components

        WriteListElements tmplst                                    ' comment this
line if Format used

        ' uncomment this line if Format used
                                            'WriteListElementsFormat tmplst

        Sheet.SetId FirstShtId
        Sheet.Display                                                       '
display first sheet

        prj.SetMeasure SaveMeasure
        prj.SetGraphTextMode SaveTextMode
        prj.SetGraphTextHeight SaveTextHeight

End Sub
```

```
Function WriteListElements (mylist)

        Dim e, le, list
        Dim nComp, line, cnt, sht, sym

        ' output all relevant components
        Set mylist = SortList( mylist, "sortval" )
' Sort componentname
        Set list = CreatePartListElements (mylist, 1, "", "" )

        nComp = 1

        ' loop for all Listelements
        For Each e In list
' output list...
                Set le = list(e)

                If( line = 0 ) Then
                        Call NewPage
                        ' create new sheet
                        Set sht = GetSheet( ContentsId )
        ' CSheet-object
                        Set sym = sht.PlaceSymbol( SHEET_SYMBOL, 0, 0 )
' CSymbol-object
                End If

                cnt = line * COLUMNS_PER_PAGE
                sym.SetTextByType FREE_SYMBOL_TEXT, cnt+1, Cstr(nComp)
                sym.SetTextByType FREE_SYMBOL_TEXT, cnt+2, le.count
                sym.SetTextByType FREE_SYMBOL_TEXT, cnt+3, Left(le.name,
CompNamesLen)
                sym.SetTextByType FREE_SYMBOL_TEXT, cnt+4, Left(le.desc,
DescNamesLen)
                sym.SetTextByType FREE_SYMBOL_TEXT, cnt+5, le.supp

                WriteDevices le, sht, sym, cnt, line
' write Devices and line(s)

                nComp = nComp + 1
                line  = line  + 1
                If( line = LINES_PER_COLUMN ) Then
                        line = 0
                End If
        Next                    'list (Listelement)

        WriteListElements = true

End Function

Sub WriteDevices ( le, sht, sym, cnt, ByRef line )

        ' split Devices
        Dim arr, str, str1, str2
        Dim endLoop2: endLoop2 = False
        Dim i1, i2
        str = le.devices
        If Len(str) > DevNamesLen Then
                arr = Split(str,",")
                str1 = ""
                str2 = ""
                ' loop1 complete string
                For i1 = 0 To UBound(arr)
                        ' loop2 splitted strings
                        For i2 = i1 To UBound(arr)
                                str2 = str1
                                str1 = str1 & LTrim(arr(i2)) & ", "

                                If Len(str1) > DevNamesLen Then
```

```
                                        sym.SetTextByType FREE_SYMBOL_TEXT,
cnt+6, str2                     ' Devices

                                        line  = line  + 1
                                        cnt   = line * COLUMNS_PER_PAGE
                                        If( line = LINES_PER_COLUMN ) Then
                                                line = 0
                                                Call NewPage
                                                ' create new sheet
                                                Set sht = GetSheet( ContentsId )
                                ' CSheet-object
                                                Set sym = sht.PlaceSymbol(
SHEET_SYMBOL, 0, 0 )            ' CSymbol-object
                                        End If

                                        endLoop2 = True
                                        Exit For                ' exit loop2
                                End If
                                i1 = i2                         ' counter loop1
= loop2
                        Next                                    ' end loop2
                        If endLoop2 = True Then
                                ' some more splitted strings
                                str1 = ""
                                str2 = ""
                                endLoop2 = False
                        Else
                                ' last string
                                str = str1
                                str = Mid(str,1,Len(str)-2)
        ' clear last comma
                        End If
                Next                                            ' end loop1
        End If
        sym.SetTextByType FREE_SYMBOL_TEXT, cnt+6, str                  '
Devices

End Sub

'
-------------------------------------------------------------------------------
------------------
Sub NewPage
        sheetNumber = sheetNumber + 1
        Sheet.Create 0, sheetName & sheetNumber, SHEET_FORMAT, ContentsId, 0
' create new sheet
        Sheet.SetAttributeValue ATT_DESCRIPTION_1, sheetDesc
        Sheet.SetAttributeValue ATT_DESCRIPTION_2, ""
                ' [1rk]
        ContentsId = Sheet.GetId
        If ContentsId <> 0 And FirstShtId = 0 Then FirstShtId = ContentsId
' display first sheet
        If ContentsId = 0 Then
                message "Error_BOM_Sheet", 1
                DisconnectFromE3
                wscript.Quit
        End If
End Sub

'
-------------------------------------------------------------------------------
------------------
'
-------------------------------------------------------------------------------
------------------
' only format
Sub WriteDevicesFormat ( le )
```

```
        ' split Devices
        Dim arr, str, str1, str2
        Dim endLoop2: endLoop2 = False
        Dim i1, i2
        str = le.devices
        If Len(str) > DevNamesLen Then
                arr = Split(str,",")
                str1 = ""
                str2 = ""
                ' loop1 complete string
                For i1 = 0 To UBound(arr)
                        ' loop2 splitted strings
                        For i2 = i1 To UBound(arr)
                                str2 = str1
                                str1 = str1 & LTrim(arr(i2)) & ", "

                                If Len(str1) > DevNamesLen Then
                                        Graph.CreateText ContentsId, str2,
x_devnames, y   ' Devices
                                        y = y - y_space
                                        If y < y_min Then Call NewPageFormat
                ' create new sheet
                                        endLoop2 = True
                                        Exit For                ' exit loop2
                                End If
                                i1 = i2                         ' counter loop1
= loop2
                        Next                                    ' end loop2
                        If endLoop2 = True Then
                                ' some more splitted strings
                                str1 = ""
                                str2 = ""
                                endLoop2 = False
                        Else
                                ' last string
                                str = str1
                                str = Mid(str,1,Len(str)-2)
        ' clear last comma
                        End If
                Next                                            ' end loop1
        End If
        Graph.CreateText ContentsId, str, x_devnames, y
' Devices

End Sub

Function WriteListElementsFormat (mylist)

        Dim e, le, list
        Dim nComp

        ' output all relevant components
        Set mylist = SortList( mylist, "sortval" )
' Sort componentname
        Set list = CreatePartListElements (mylist, 1, "", "" )

        nComp = 0
        ' loop for all Listelements
        For Each e In list
' output list...
                Set le = list(e)

                y = y - y_space
                If y < y_min Then Call NewPageFormat
        ' create new sheet

                nComp = nComp + 1
```

```
                Graph.CreateText ContentsId, Cstr(nComp), x_position, y
                Graph.CreateText ContentsId, le.count, x_quantity, y

                If le.desc <> "" Then
                        Graph.CreateText ContentsId, Left(le.desc,
DescNamesLen), x_description, y
                End If
                If le.supp <> "" Then Graph.CreateText ContentsId, le.supp,
x_supplier, y
                Graph.CreateText ContentsId, Left(le.name, CompNamesLen),
x_compcode, y

                WriteDevicesFormat le
                        ' write Devices and line(s)
        Next                    'list (Listelement)

        WriteListElementsFormat = true

End Function

Sub NewPageFormat
        y = y_max
        sheetNumber = sheetNumber + 1
        Sheet.Create 0, sheetName & sheetNumber, sheetFormat, ContentsId, 0
' create new sheet
        ContentsId = Sheet.GetId
        If ContentsId <> 0 And FirstShtId = 0 Then FirstShtId = ContentsId
' display first sheet
        If ContentsId = 0 Then
                message "Error_BOM_Sheet", 1
                DisconnectFromE3
                wscript.Quit
        End If
End Sub

'
--------------------------------------------------------------------------------
-------------------
```