Get the LabelSetId from Alignment class

API · https://civilwhiz.com/docs/get-the-labelsetid-from-alignment-class/

Motivation

Civil 3D offers API to create an Alignment via the `Alignment.Create` static method. Interestingly, even though it takes in a `LabelSetId` as a constructor parameter, but it doesn't expose the parameter. Which is really unfortunate.

The workaround – extension method

So we need to write our own extension method for it. Based on Norman Yuan's idea on a forum post, here's the implementation.

```
  public static AlignmentLabelSetStyle GetLabelSet(this Alignment alignment,
      CivilDocument civilDoc, Transaction ts)
  {

      foreach (ObjectId labelGroupId in alignment.GetAlignmentLabelGroupIds())
      {
          var labelGroup = ts.GetObject<AlignmentLabelGroup>(labelGroupId);
          foreach (var alignmentLabelSetStyleId in
civilDoc.Styles.LabelSetStyles.AlignmentLabelSetStyles)
          {
              var alignmentLabelSetStyle =
ts.GetObject<AlignmentLabelSetStyle>(alignmentLabelSetStyleId);
              foreach (var labelSetItem in alignmentLabelSetStyle)
              {
                  if (labelSetItem.LabelStyleName == labelGroup.StyleName
                      && SameLabelType(labelSetItem.LabelStyleType, labelGroup.LabelType))
                  {
                      return alignmentLabelSetStyle;
                  }
              }
```

```
        }

    }

    return null;
 }

//this is unfortunate but I haven't find a more elegant way to map the two different LabelType
 private static bool SameLabelType(LabelStyleType labelStyleType, LabelType labelType)
 {
     switch (labelType)
     {
         case LabelType.SurfaceContour:
             return labelStyleType == LabelStyleType.SurfaceContour;
         case LabelType.AlignmentMajorStation:
             return labelStyleType == LabelStyleType.AlignmentMajorStation;
         case LabelType.AlignmentMinorStation:
             return labelStyleType == LabelStyleType.AlignmentMinorStation;
         case LabelType.AlignmentGeometryPoint:
             return labelStyleType == LabelStyleType.AlignmentGeometryPoint;
         case LabelType.AlignmentProfileGeometryPoint:
             return labelStyleType == LabelStyleType.AlignmentProfileGeometryPoint;
         case LabelType.AlignmentStationEquation:
             return labelStyleType == LabelStyleType.AlignmentStationEquation;
         case LabelType.AlignmentDesignSpeed:
             return labelStyleType == LabelStyleType.AlignmentDesignSpeed;
         case LabelType.AlignmentSuperelevationCriticalPoints:
             return labelStyleType == LabelStyleType.AlignmentSuperelevationCriticalPoints;
         case LabelType.AlignmentStationOffset:
             return labelStyleType == LabelStyleType.AlignmentStationOffset;
         case LabelType.AlignmentCurve:
             return labelStyleType == LabelStyleType.AlignmentCurve;
         case LabelType.AlignmentSpiral:
             return labelStyleType == LabelStyleType.AlignmentSpiral;
         case LabelType.AlignmentTangentIntersection:
             return labelStyleType == LabelStyleType.AlignmentTangentIntersection;
         case LabelType.AlignmentPointOfIntersection:
             return labelStyleType == LabelStyleType.AlignmentPointOfIntersection;
         case LabelType.ProfileMajorStation:
             return labelStyleType == LabelStyleType.ProfileMajorStation;
```

```
            case LabelType.ProfileMinorStation:
                return labelStyleType == LabelStyleType.ProfileMinorStation;
            case LabelType.ProfileHorizontalGeometryPoint:
                return labelStyleType == LabelStyleType.ProfileHorizontalGeometryPoint;
            case LabelType.ProfileGradeBreaks:
                return labelStyleType == LabelStyleType.ProfileGradeBreaks;
            case LabelType.ProfileLine:
                return labelStyleType == LabelStyleType.ProfileLine;
            case LabelType.ProfileCrestCurve:
                return labelStyleType == LabelStyleType.ProfileCrestCurve;
            case LabelType.ProfileSagCurve:
                return labelStyleType == LabelStyleType.ProfileSagCurve;
            case LabelType.ProfileViewDepth:
                return labelStyleType == LabelStyleType.ProfileViewDepth;
            case LabelType.SectionViewOffsetElevation:
                return labelStyleType == LabelStyleType.SectionViewOffsetElevation;
            case LabelType.SectionMajorOffset:
                return labelStyleType == LabelStyleType.SectionMajorOffset;
            case LabelType.SectionMinorOffset:
                return labelStyleType == LabelStyleType.SectionMinorOffset;
            case LabelType.SectionGradeBreak:
                return labelStyleType == LabelStyleType.SectionGradeBreak;
            case LabelType.SectionSegment:
                return labelStyleType == LabelStyleType.SectionSegment;
            case LabelType.ViewFrame:
                return labelStyleType == LabelStyleType.ViewFrame;
            case LabelType.SectionCorridorPoint:
                return labelStyleType == LabelStyleType.SectionCorridorPoint;
            default:
                return false;
        }
    }
```

You can just call `alignment.GetLabelSet(civilDoc, ts).ObjectId` to get the `ObjectId` for the `LabelSetId`.



Ngu Soon Hui

My passion is in sharing knowledge — Civil 3D or otherwise– with the world.

I’m also the benevolent dictator for life at MES Innovation Sdn Bhd.