

# TMS Advanced Smooth TimeLine DEVELOPERS GUIDE

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## TAdvSmoothTimeLine



### TAdvSmoothTimeLine description

Smooth time line with complex fills, opacity, sections, indicators and tickmarks. With optional transparent or semi transparent floating hints and moveable indicators.

### TAdvSmoothTimeLine features

- Office styles
- Complex gradients with full opacity control
- Moveable indicators with different shapes
- Customizable sections with floating hints
- Fully Customizable Annotations
- Scrolling and Zooming
- Different Divisiontypes
- Moveable and Sizeable Sections

### TAdvSmoothTimeLine use

The TAdvSmoothTimeLine component can be fully customized. Indicators can be added, removed on the timeline. Sections support floating hints to display extra information that follows the mouse when hovering the section.

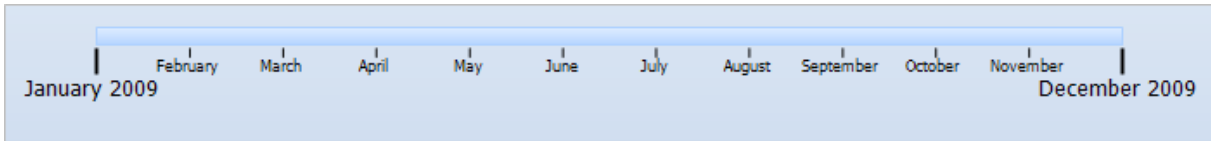
### Start and EndTime

To change the start and end time of the timeline, change the Range.RangeFrom and Range.RangeTo properties. In combination with RangeAppearance.DivisionFormat and RangeAppearance.SubDivisionFormat these properties give full access to every possible time range. The Range.Divisions and Range.SubDivisions properties allow you to specify to number of steps from RangeFrom to RangeTo. For each step a tickmark is drawn.

### Example: Years / Months

Settings to display a range from January 2009 to December 2009 with a subdivision for each month:

```
AdvSmoothTimeLine1.Range.RangeFrom := EncodeDate(2009, 1, 1);
AdvSmoothTimeLine1.Range.RangeTo := EncodeDate(2009, 12, 31);
AdvSmoothTimeLine1.Range.Divisions := 1;
AdvSmoothTimeLine1.Range.SubDivisions := 11;
AdvSmoothTimeLine1.RangeAppearance.DivisionFormat := 'mmmm yyyy';
AdvSmoothTimeLine1.RangeAppearance.SubDivisionFormat := 'mmmm';
AdvSmoothTimeLine1.RangeAppearance.DivisionFont.Size := 10;
AdvSmoothTimeLine1.RangeAppearance.SubDivisionFont.Size := 7;
AdvSmoothTimeLine1.RangeAppearance.DivisionTickMarkSize := 15;
AdvSmoothTimeLine1.RangeAppearance.SubDivisionTickMarkSize := 5;
AdvSmoothTimeLine1.HorizontalMargin := 50;
AdvSmoothTimeLine1.Width := 700;
```

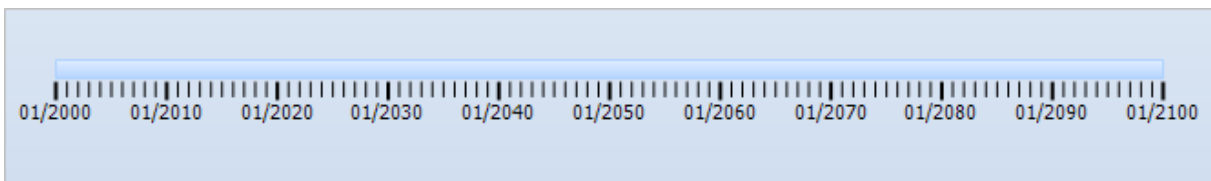


## Divisions

By default the timeline has a FixedNumber division type. This division type can be changed to hours, minutes, seconds, months, years, days and milliseconds. When choosing the FixedNumber division type the timeline will always be divided in the amount of divisions and/or subdivisions. When the division type is based on a different type the values and tickmarks will be calculated based on the divisioncount and the division type.

Sample: RangeFrom := 1/1/2000  
 RangeTo := 1/1/2100  
 DivisionType := dtYear  
 Divisions := 10  
 SubDivisions := 1

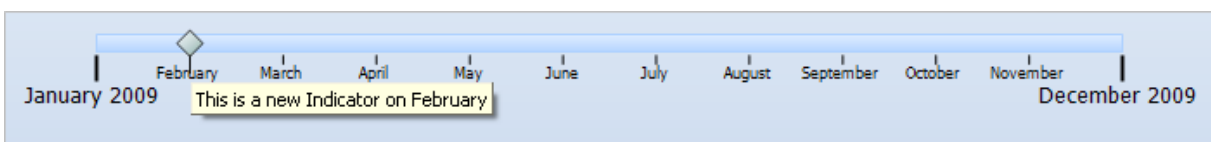
Result:



## Indicators

The TAdvSmoothTimeLine can also display indicators with different shapes to mark special points on the timeline or to give extra information.

```
with AdvSmoothTimeLine1.TimeLineIndicators.Add do
begin
    Position := AdvSmoothTimeLine1.Range.RangeFrom +
    ((AdvSmoothTimeLine1.Range.RangeTo - AdvSmoothTimeLine1.Range.RangeFrom) /
    AdvSmoothTimeLine1.Range.SubDivisions);
    Shape := isDiamond;
    Color := clWhite;
    ColorTo := clGreen;
    Hint := 'This is a new Indicator on February';
end;
```



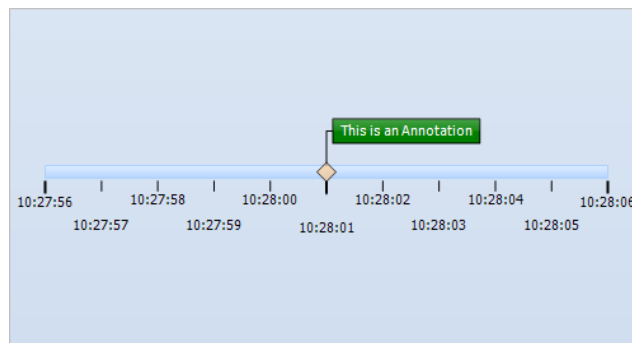
The indicator is limited to a single position and can be dragged along the timeline to change the position. With the OnIndicatorPositionChanged and OnIndicatorPositionChanging event you can see the current position of the indicator. The indicator dragging can be disabled by setting the Fixed property to true.

## Annotations

The annotations are added in the same collection as the indicators, but setting the Annotation string property, adds an text to the annotation that can be positioned on top of the timeline or at the bottom of the timeline. When multiple annotations are added the timeline automatically calculates the best possible position to make sure the annotation does not intersect with another annotation.

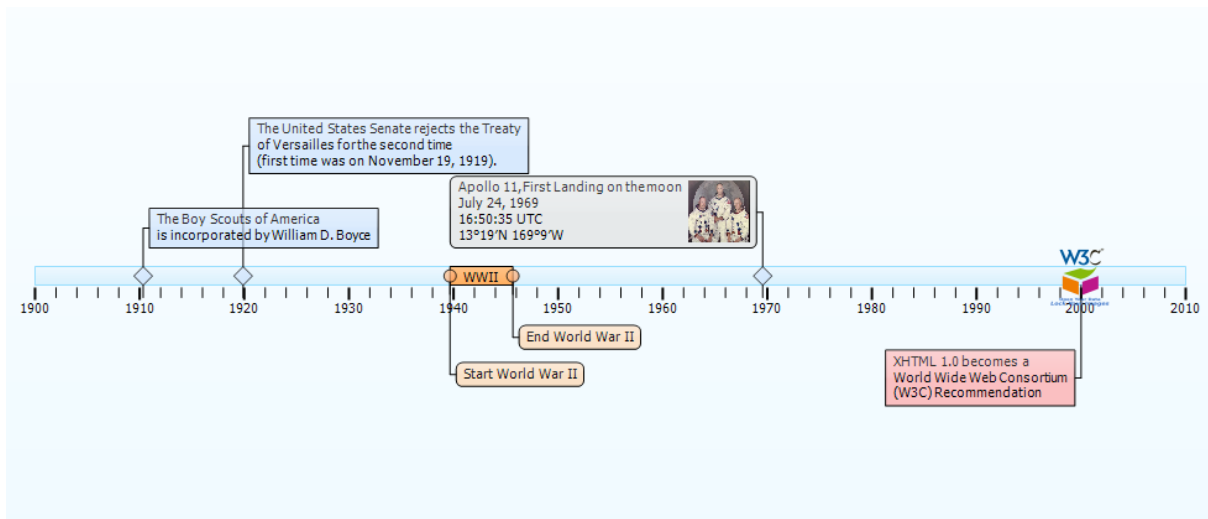
Below is a sample when adding an annotation with a white textcolor and a green background color.

```
AdvSmoothTimeLine1.TimeLineBar.AnnotationFont.Color := clWhite;
with AdvSmoothTimeLine1.TimeLineIndicators.Add do
begin
  Annotation := 'This is an Annotation';
  Position := IncSecond(AdvSmoothTimeLine1.Range.RangeFrom, 5);
  AnnotationColor := clGreen;
end;
```



An annotation can also contain an image. Add an ImageList container and set the ImageListIndex property to the correct image.

Eventually when adding multiple annotations at different positions, with different colors and multiline text the result could be something like this:



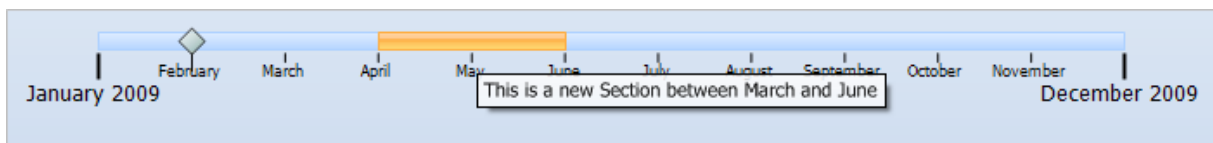
## Sections

An indicator is limited to one position property while the Section can be stretched over a timezone between a starttime and endtime.

```

with AdvSmoothTimeLine1.TimeLineSections.Add do
begin
    StartTime := AdvSmoothTimeLine1.Range.RangeFrom +
    ((AdvSmoothTimeLine1.Range.RangeTo - AdvSmoothTimeLine1.Range.RangeFrom) /
    AdvSmoothTimeLine1.Range.SubDivisions) * 3;
    EndTime := AdvSmoothTimeLine1.Range.RangeFrom +
    ((AdvSmoothTimeLine1.Range.RangeTo - AdvSmoothTimeLine1.Range.RangeFrom) /
    AdvSmoothTimeLine1.Range.SubDivisions) * 5;
    Hint := 'This is a new Section between March and June';
end;

```



The Section hints can be customized with the HintFill property on Section level. There are also DefaultHintfill, DefaultIndicator and DefaultSectionFill to apply when a new indicator or section is added.

### TimeLine Interaction

The timeline has a minimumrange and a maximumrange property. These properties define the limits of the rangefrom and rangeto. When click-dragging with the mouse on the time line, you can scroll from left to right or vice versa.

When holding the CTRL key the timeline will zoom-in or out.

When adding a section, the section can be moved and sized with the mouse. Hovering the section pops up 2 drag handles that can be used to size the section. When clicking and dragging the section the section can be moved to a new position.

