Impress: Interoperability of Tab Stops
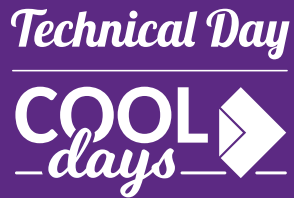
Sarper Akdemir
Consultant Software Engineer
Intern
sarper.akdemir@collabora.com
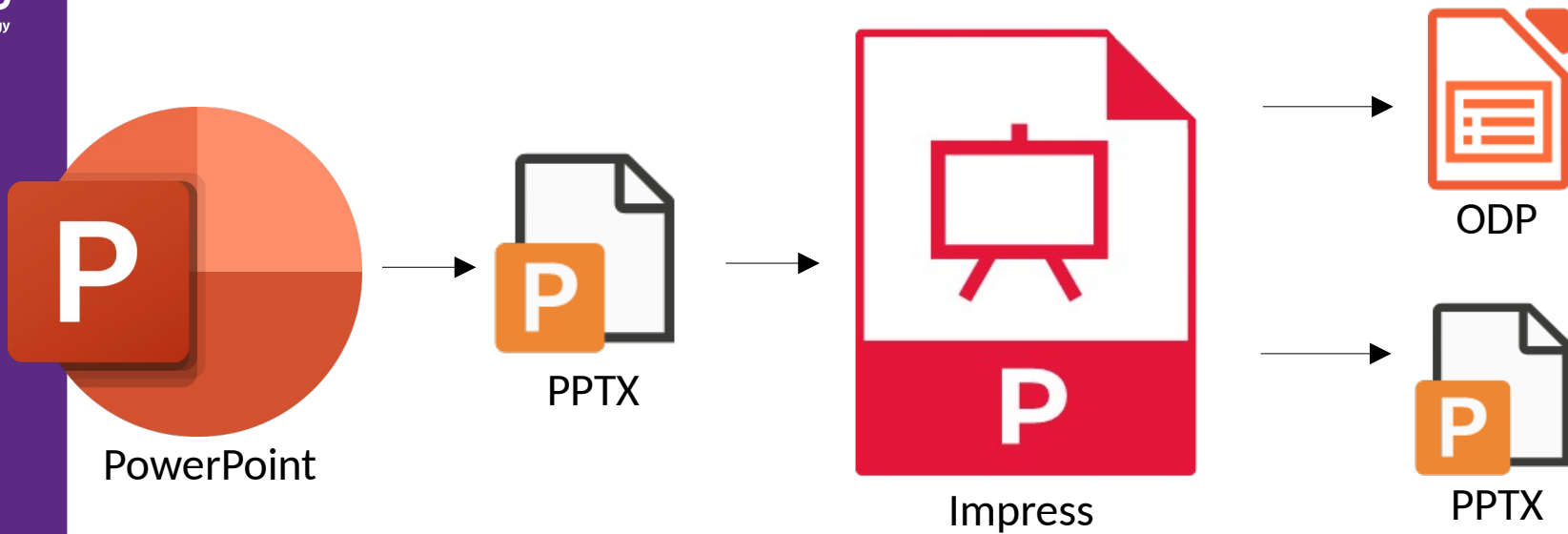
Collabora Online

Technical Day
COOL days

LibreOffice Technology

Interoperability with OOXML

PowerPoint → PPTX → Impress → ODP

Impress → PPTX

0	1	2	3	4	5	6

| 0 | | | 1 | | 2 | | 3 | | 4 | | 5 |

PowerPoint

0	1	2	3	4	5	6
0	1	2	3	4	5	

Impress

Breakdown of Tab Stops

```
0    1        2      3      4      5
```

style:tabstop-distance

```
<style:paragraph-properties>
  <style:tab-stops>
    <style:tab-stop style:position="5.0cm"/>
    <style:tab-stop style:position="10.0cm"/>
  </style:tab-stops>
</style:paragraph-properties>
```

The Plan

1) Document Model

2) Make EditEngine consider this new property

3) Expose the UNO API

4) Import/export for PPTX

5) Import/export for ODF

6) Connect loose ends in the UI

1) Document Model

- Paragraph Styles

  ...

  - Tab Stop Item

    - Tab Stop List

      - position

      - alignment

        ...

    - Tab Stop Distance

  ...

```cpp
class SvxTabStopItem : SfxPoolItem
{
    SvxTabStopArr maTabStops;
    sal_Int32 mnDefaultDistance;
}
```

```cpp
bool SvxTabStopItem::QueryValue( ... ) const
{
    ...
}


bool SvxTabStopItem::PutValue( ... )
{
    ...
}
```

2) Make EditEngine consider this new property

```cpp
//editeng/source/editeng/impedit3.cxx:1050
case EE_FEATURE_TAB:
{
  {...}
  aCurrentTab.aTabStop =
      pNode->GetContentAttribs().FindTabStop(nCurPos, aEditDoc.GetDefTab());
  {...}
}
break;

//editeng/source/editeng/editdoc.cxx:1821
SvxTabStop ContentAttribs::FindTabStop( sal_Int32 nCurPos, sal_uInt16
nDefTab )
{
  const SvxTabStopItem& rTabs = GetItem( EE_PARA_TABS );
  {...}
  // if there's a default tab size defined for this item use that instead
  if (rTabs.GetDefaultDistance())
    nDefTab = rTabs.GetDefaultDistance();
  {...}
  return aTabStop;
}
```

4) Import & export for PPTX

- Paragraph Properties → Default Tab Size

```
<a:p>
  <a:pPr defTabSz="182880"/>
  <a:r>
    <a:t>0    1    2    3    4    5</a:t>
  </a:r>
</a:p>
<a:p>
```
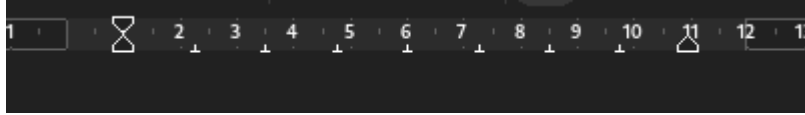
5) Import & export for ODF

- Paragraph Properties → tab-stop-distanc

```
<style:style style:name="P1" style:family="paragraph">
  <style:paragraph-properties loext:tab-stop-distance="5cm">
    <style:tab-stops>
      <style:tab-stop style:position="2.54cm"/>
    </style:tab-stops>
  </style:paragraph-properties>
</style:style>
```

6) Connect loose ends in the UI


```cpp
// svx/source/dialog/svxruler.cxx:1004
void SvxRuler::UpdateTabs()
{
  {...}
  tools::Long lCurrentDefTabDist = lDefTabDist;
  if(mxTabStopItem->GetDefaultDistance())
    lCurrentDefTabDist = mxTabStopItem->GetDefaultDistance();
  tools::Long nDefTabDist = ConvertHPosPixel(lCurrentDefTabDist);
  {...}
}
```
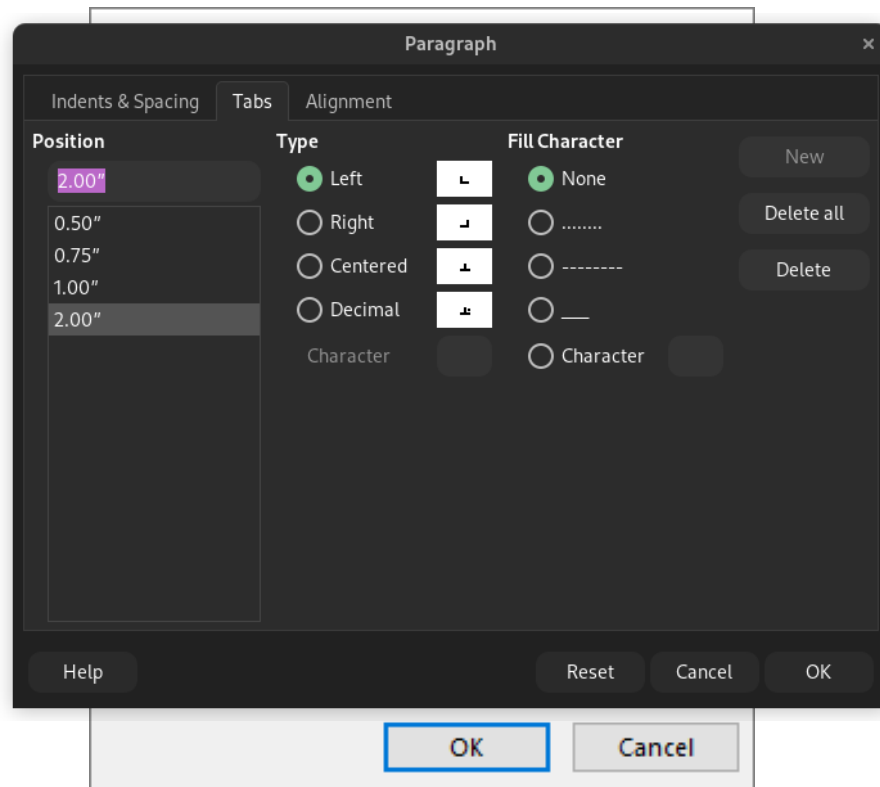
What's left?

- No UI to set paragraph scoped tab-stop-distance

- Writer doesn't know about paragraph scoped tab-stop-distance

Thank you!

By Sarper Akdemir

@CollaboraOffice
hello@collaboraoffice.com
www.collaboraoffice.com

Collabora
Online

Technical Day
COOL
days

LibreOffice Technology