

1. BI.CollectionView
2. CollectionViewSVG
3. CollectionViewCanvas ()
4. CollectionViewCanvas ()

1. BI.CollectionView
 - a. celldiv (labelbutton)
2. CollectionViewSVG
 - a. collectionsvgcellpathtext
3. CollectionViewCanvas ()
 - a. collectioncanvascell ()
 - b. cellBI.CanvassolidtextsetFont
4. CollectionViewCanvas ()
 - a. 3

1. BI.CollectionView
 - a. 2262; 80px15px =====> ~1-2s 1-3fps
 - b. 2792; 60px10px =====> ~3s~1fps
 - c. 4192; 40px7px =====> ~5s~0fps
2. CollectionViewSVG
 - a. 2262; 80px15px =====> ~3s 1-2fps
 - b. 2792; 60px10px =====> ~5s 0-2fps
 - c. 4192; 40px7px =====> ~8s ~0fps
3. CollectionViewCanvas ()
 - a. 2262; 80px15px =====> <1s 30-50fps
 - b. 2792; 60px10px =====> <1s ~25fps
 - c. 4192; 40px7px =====> <1s 6-20fps
4. CollectionViewCanvas ()
 - a. 2262; 80px15px =====> <1s 7-10fps
 - b. 2792; 60px10px =====> <1s 4-6fps
 - c. 4192; 40px7px =====> <1s 2fps

Canvas

canvas[High DPI Canvas](#)

devicePixelRatio / e.g. css2pxtext2px * devicePixelRatio

-----118-----

(High DPI Canvas)BackingStorePixelRatioCanva

HiDPICanvas

```
_createHiDPICanvas: function (w, h, ratio) {  
  if (!ratio) {  
    ratio = window.devicePixelRatio ||  
      window.screen.deviceXDPI / window.screen.logicalXDPI || 1;  
  }  
  var canvas = document.createElement("canvas");  
  if (!document.createElement('canvas').getContext) {  
    canvas = window.G_vmlCanvasManager.initElement(canvas);  
  }  
  canvas.width = w * ratio;  
  canvas.height = h * ratio;  
  canvas.style.width = w + "px";  
  canvas.style.height = h + "px";  
  canvas.getContext("2d").setTransform(ratio, 0, 0, ratio, 0, 0);  
  return canvas;  
},
```

~~backingStorePixelRatiocanvasbacking-storecanvascanvascontextcanvasunderlying-storageunderlying-storagebacking-storecanvasbacking-storebacking-store backingStorePixelRatio.g-backingStorePixelRatio2200px * 200pxcanvascanvas400px * 400px~~

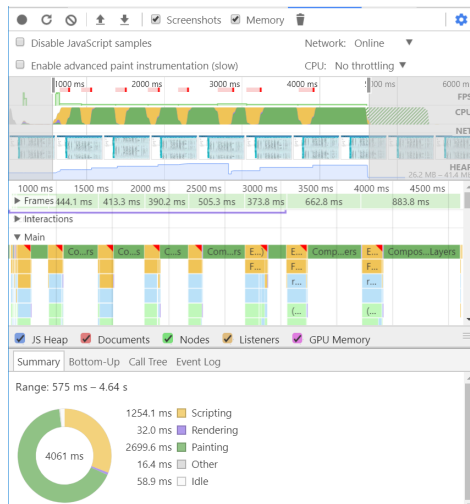
~~blocked URL~~

~~canvas~~

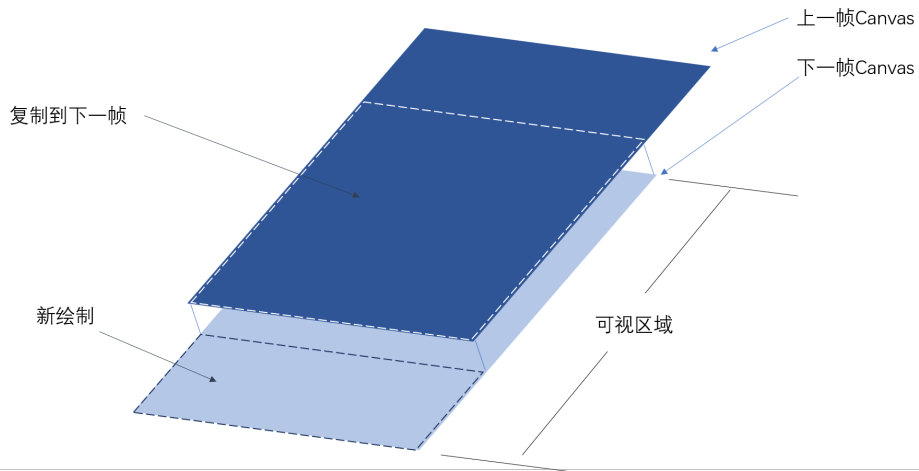
~~blocked URL~~

~~pixelRatio = devicePixelRatio / backingStorePixelRatio / pixelRatio1 canvas canvas canvas / pixelRatio CSS style /:~~

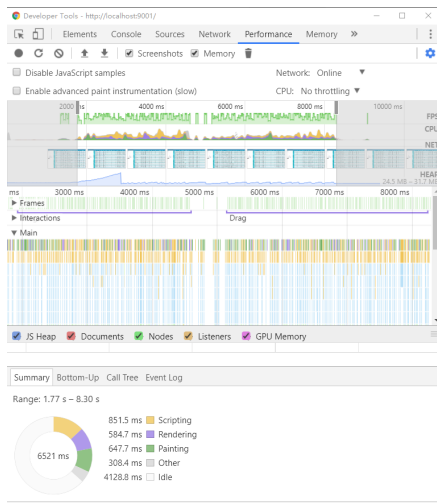
~~canvas table canvas cell cell pixelRatio > 1 canvas canvas painting 2262; 80px15px pixelRatio 11.5fps 30-503~~



~~canvas table 2262; 80px15px pixelRatio 11.5fps 7-1016-20~~



High DPI CanvassetTransformCanvasratio1drawImage/drawImage1drawImage60cell



ChromeFireFoxOperaEdgeIE(9)