

Android Profiler

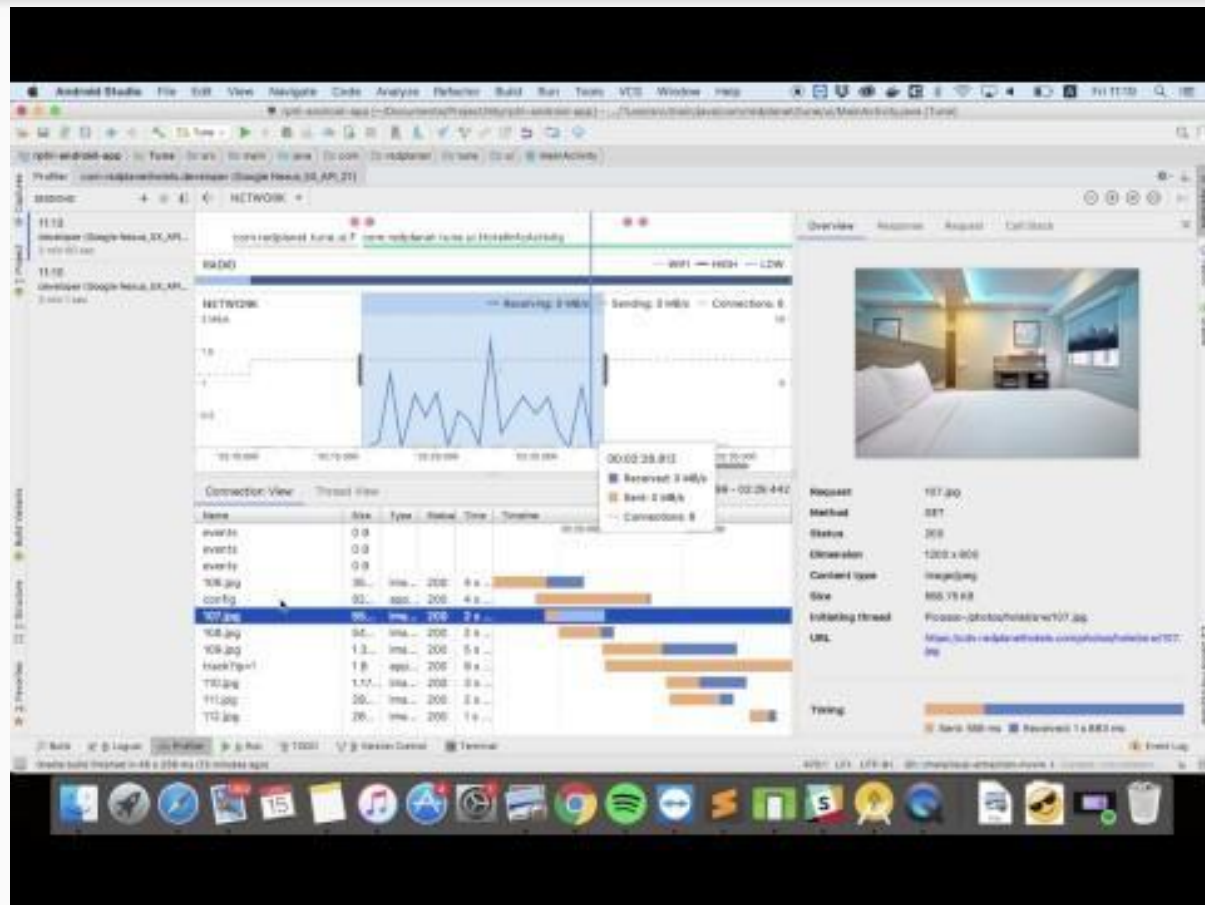
Thuy

Growth Session #15 - June 14-15 2018

- Component tools provide real-time data about app CPU, Memory, Network usage that help for define app performance
- Replaces Android Monitor tools
- Include
 - CPU Profiler
 - Memory Profiler
 - Network Profiler
- Noted
 - Profiler is not telling what is wrong with app, tools just show what app is doing and then you need to investigate on that
 - To avoid performance problems, use the profiling tools listed on this page to identify where app is making inefficient use of resources

- Supports only the `HttpURLConnection` and `OkHttp` libraries for network connections.
- An example about inspecting network in the hotel gallery screen

Network Profiler Example



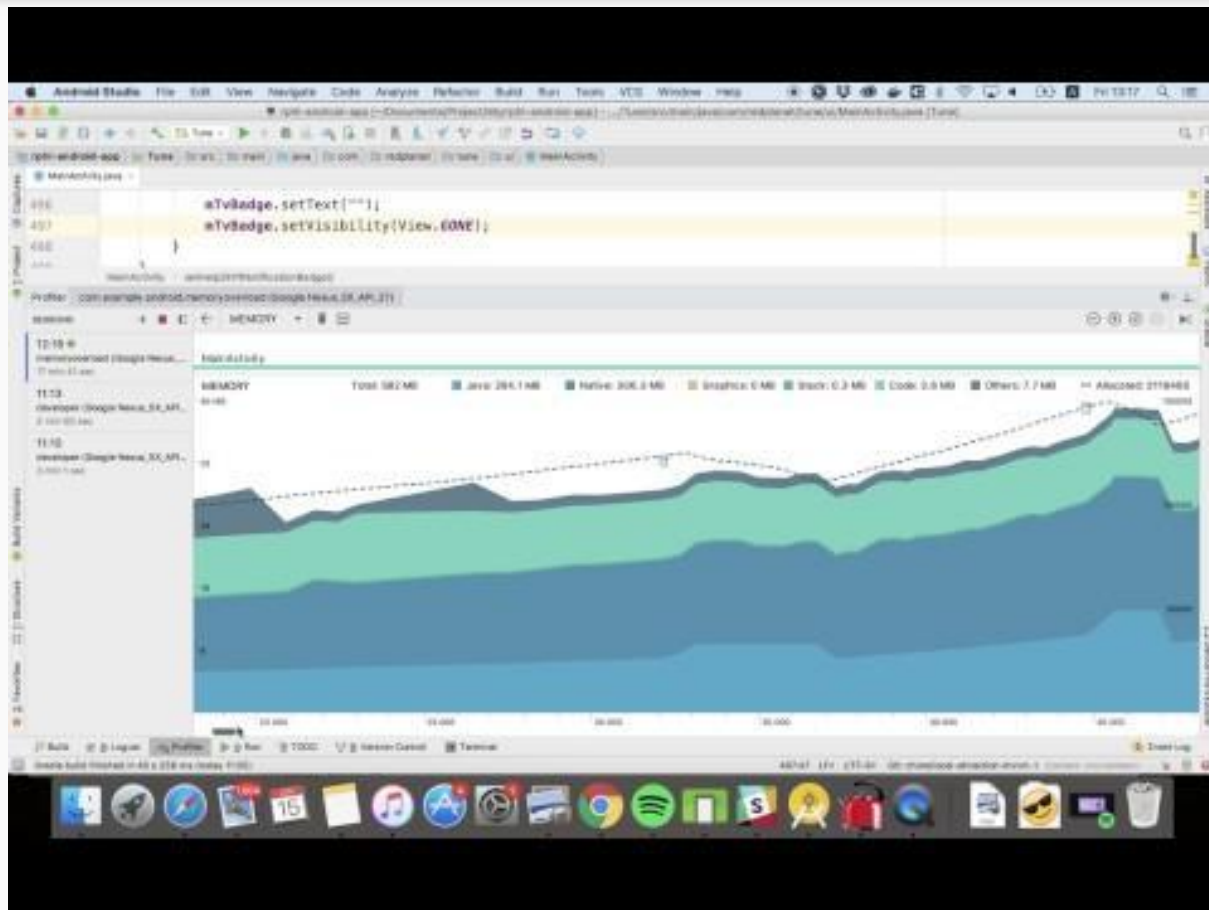
Memory Profiler

- Inspect the Java heap and memory allocations with Memory Profiler
- Dump heap and inspect heap
- Record memory allocate

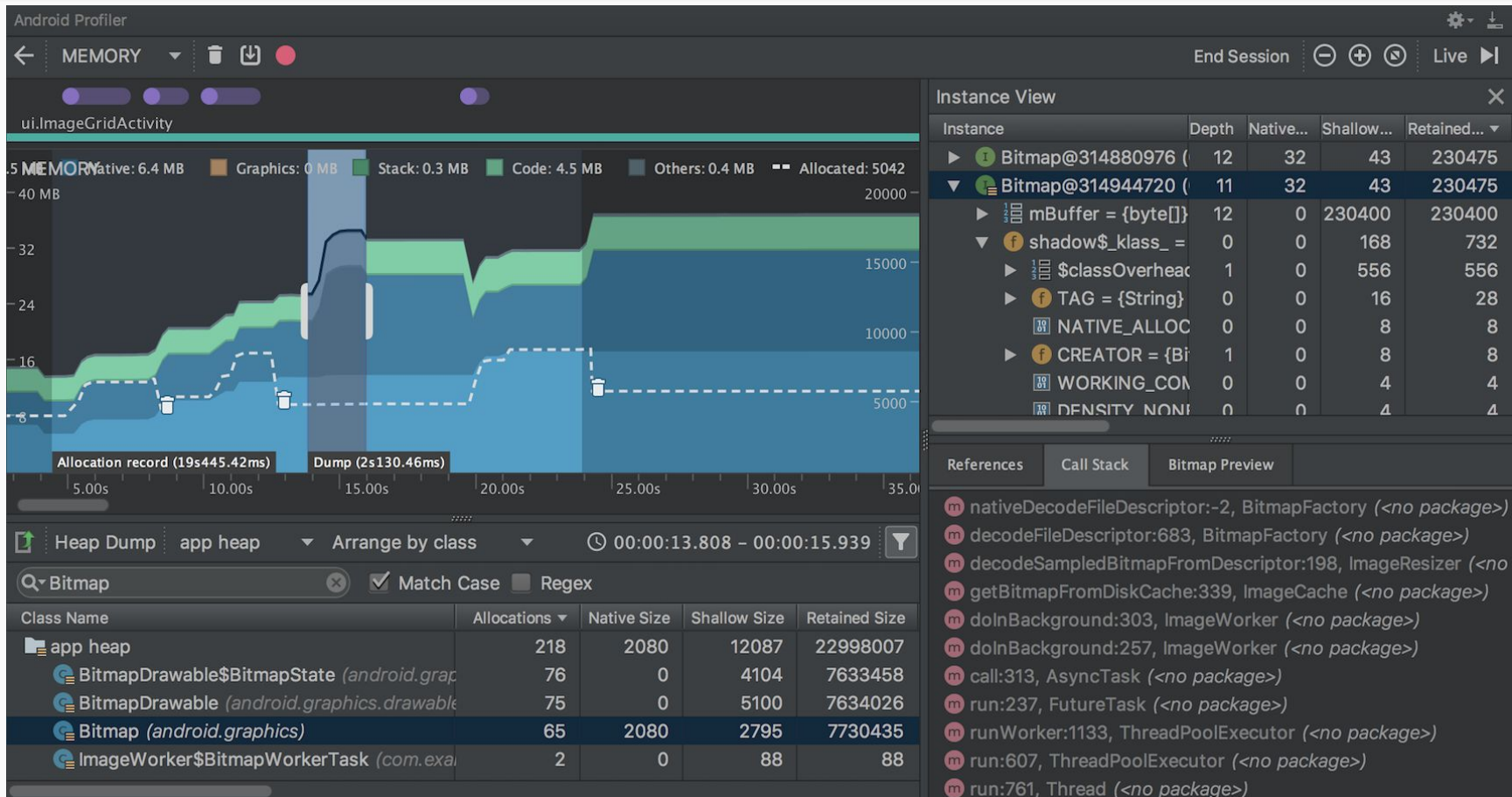
Memory Profiler

```
public void addRowOfTextViews(View view) {  
  
    LinearLayout root = findViewById(R.id.rootLinearLayout);  
  
    LinearLayout child = new LinearLayout(context: this);  
    child.setOrientation(LinearLayout.HORIZONTAL);  
    setLayoutParams(child);  
  
    TextView textViews[] = new TextView[NO_OF_TEXTVIEWS_ADDED];  
  
    for (int position = 0; position < NO_OF_TEXTVIEWS_ADDED; position++) {  
        textViews[position] = new TextView(context: this);  
        setLayoutParams(textViews[position]);  
        setResource(textViews[position], position);  
        child.addView(textViews[position]);  
    }  
    root.addView(child);  
}
```

Memory Profiler Example

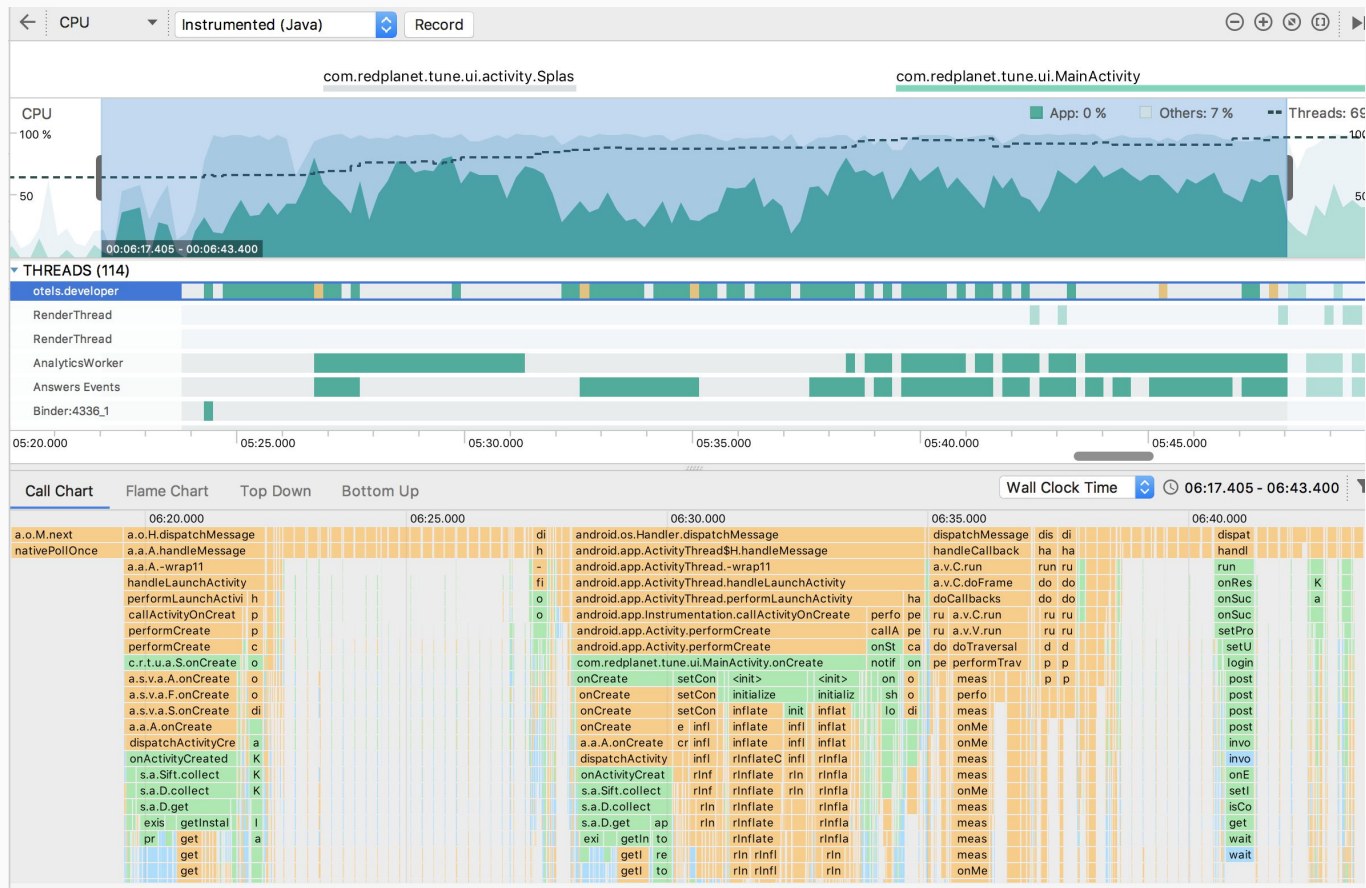


Memory Profiler Dump Heap Example



- Inspect CPU activity and method traces with CPU Profiler
- Call chart, Bottom Up, Top Down chart
- Flame chart
 - ⇒ Method trace list where each method is sized on the horizontal axis based on the amount of time the method was executing relative to other methods

CPU Profiler Example



Conclusion

- We can apply the profiler tools for the RP project
- RP application performance could be better:
 - CPU usage is high
 - Move Serialize to Parcellize
 - Use multi-thread
 - Memory
 - Memory leak: No
 - Need to analyze more on RP project
 - Network
 - Hmm, currently I don't have any idea to optimize
 - The tools really helpful for inspect our request

Defining performance
problem is easy, but fixing
issues will require a lot of
efforts

Let use Android Profiler
everyday

Thanks!

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