

# Performance on a Mobile Platform

Guru Kini

# Agenda

- The mobile phone perspective
- Defining “Performance”
- The art of Performance Measurement
- Top Performance Killers
- Scalability and Performance

# The Mobile Phone Perspective

- Resource constrained environment
  - Limited battery life
  - Limited processing power
- Getting more and more powerful
  - Bringing true convergence at your fingertips
- “Smart Phones”
  - How would you define a Smartphone?
  - Ever expanding range of applications
- The Operating systems have do more with less
  - Viz., Real time capabilities

# Defining “Performance”

- Set of measurable system properties that wow or upset the end user.  
Factors:
  - Speed (of operations, boot up time, etc.)
  - RAM/ROM footprint
  - Power consumption
  - Throughput
- Performance is **not** a software-only feature
  - Hardware platform is very crucial
- Measure, Analyze, Improve!
- Why bother to measure?
  - You can't improve what you don't measure
  - Software inspection is not enough
  - Your solution/application shares the resources with everything else on the phone

# The Art of Performance Measurement

- It remains a big challenge!
- What do you measure?
  - ROM, RAM footprints?
  - Speed?
  - No prescriptive solutions
- Think “Device Use Cases” (DUCs)
  - End-to-end phone usage scenarios
  - These typically cover a number of components
- Measurement techniques should be: Automated, Reliable, Consistent & Configurable

# Top Performance Killers

- Incomplete understanding of the API
  - More common than we think
  - Wrong choice of algorithm
- Inefficient use of resources
  - File I/O
  - Being agnostic of external media
  - Inefficient memory usage and memory leaks.
- Inappropriate use of design idioms
  - Shoe-horning design patterns
  - “Future Proofing” the code
  - Ineffective use of frameworks

# Scalability and Performance

- Goes hand in hand with Performance
- Questions to ask:-
  - How far can your code go?
  - How many shared resources does it use?
  - How might your solution be used out there?
- How will the new technologies impact your solution?
  - Better software
  - Multimedia innovation
  - Better, faster hardware

**Questions?**

**Thank you**

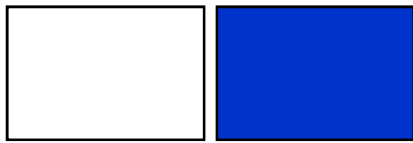
**NOKIA**

# Masterbrand color palette

## Note:

To prevent printing a hidden slide (like this), de-select "Printing hidden slides" option in print menu.

### Core white & blue



R 255	R 000
G 255	G 051
B 255	B 204

### Neutrals



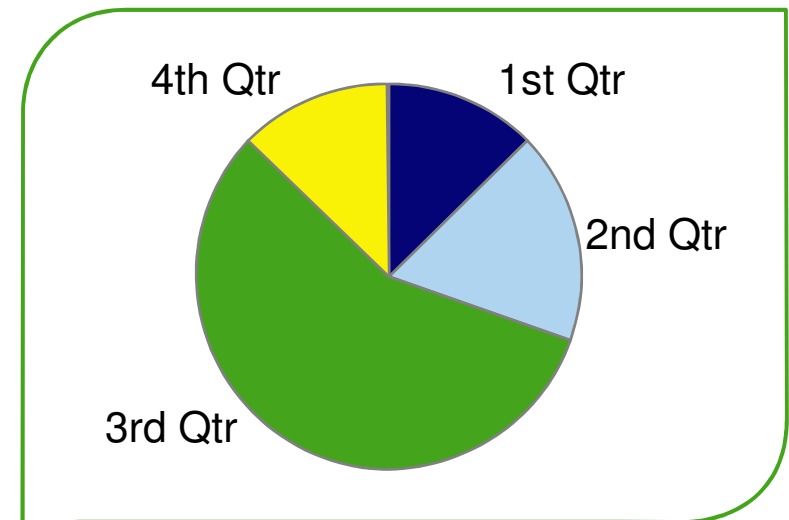
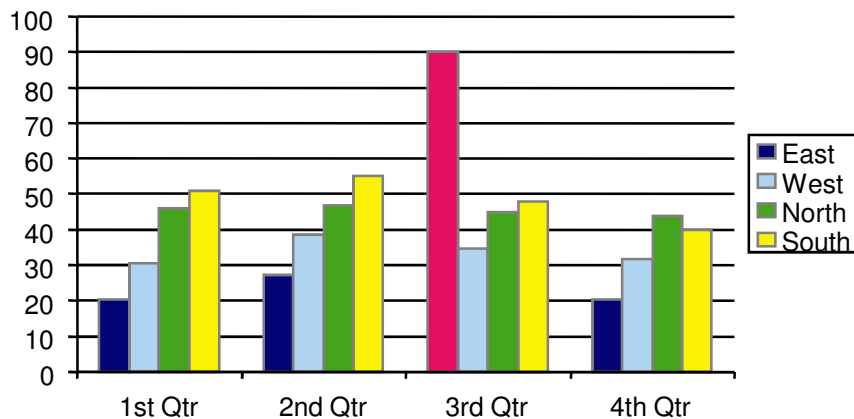
R 004	R 002	R 224	R 175
G 004	G 076	G 219	G 212
B 119	B 028	B 202	B 240

### Brights



R 249	R 068	R 228
G 242	G 165	G 014
B 006	B 028	B 098

The pink highlight color is to be used sparingly, not in large areas and can only be used as 100%, never as a tint.



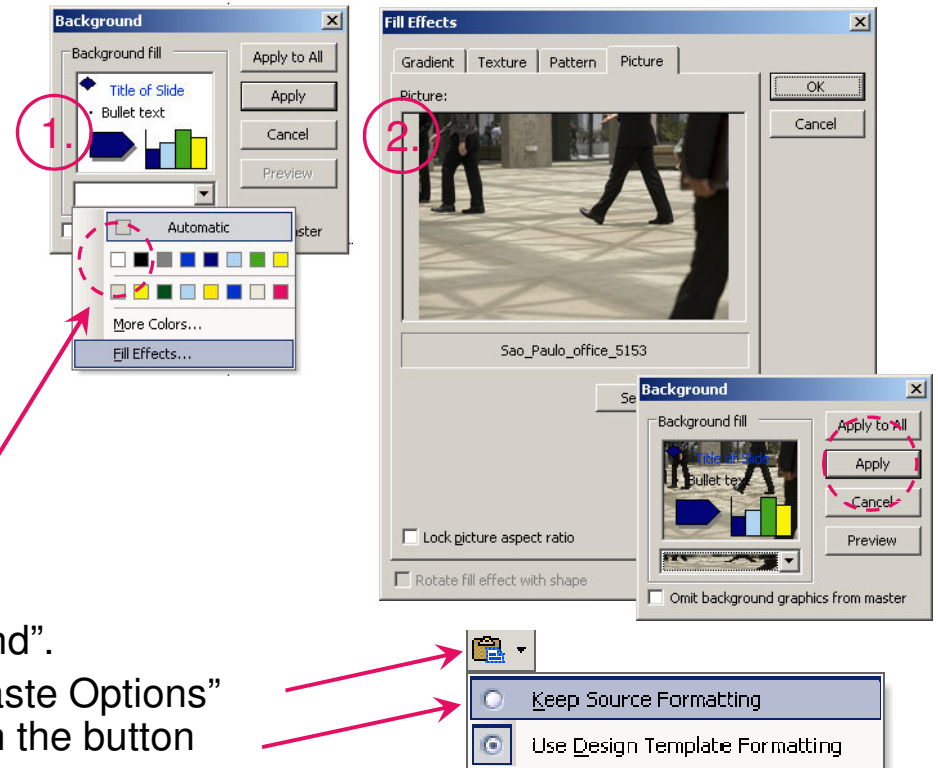
# Working with images

## Adding a background (full bleed) image

- 1) Right-click on a blank space on a slide (or, Format > Background)
- 2) Select: Fill effects > Picture > Select picture, and browse to find wanted background picture > Apply (or Apply to all).

**Note:** ensure that the dimensions are according to PowerPoint page setup (A4 by default).

- To **delete existing background** (picture or color), select white color from “Background fill” color palette.
- To **save the background image**, right-click the slide outside of any placeholders and click “Save Background”.
- To **retain the slides' original formatting**, click the “Paste Options” button which appears under the slides you pasted > on the button menu, click “Keep Source Formatting”.
- If you decide you want the **current design template** styles to apply, click “Use Design template formatting” (this is the default).



For more info and advanced options go to “Consumer touch points” / “Corporate applications” / “Office templates” in Nokia Brand Book.