Power Profiles in Plasma
Subtitle to be more precise

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Goal

- System should adapt to usage
  - When reading documents battery should last as long as possible
  - When playing games we want maximum performance
- Default machine configuration represents a compromise (even though it also adapts)
- Manual adjustments might be needed
Problem

- No unified interface for controlling performance
- Differs per component & vendor

To complicated!
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To complicated!
Problem

● No unified interface for controlling performance
● Differs per component & vendor

To complicated!
Kernel: `platform_profiles`

- Central interface to control hardware characteristics
  - Performance, fans, temperature, ...
- Exposed by ACPI driver if supported
- `read/write /sys/firmware/acpi/platform_profile`

**Available profiles:**

<table>
<thead>
<tr>
<th>Profile</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>low-power</td>
<td>Low power consumption</td>
</tr>
<tr>
<td>cool</td>
<td>Cooler operation</td>
</tr>
<tr>
<td>quiet</td>
<td>Quieter operation</td>
</tr>
<tr>
<td>balanced</td>
<td>Balance between low power consumption and performance</td>
</tr>
<tr>
<td>balanced-performance</td>
<td>Balance between performance and low power consumption with a slight bias towards performance</td>
</tr>
<tr>
<td>performance</td>
<td>High performance operation</td>
</tr>
</tbody>
</table>
Power Profiles Daemon

- Central daemon to manage power profiles
- Available profiles:
  - Power-saver
  - Balanced
  - Performance
- Can execute action when changing profile
- Uses platform_profile when available
Integration into Plasma

Battery and Brightness

- Inhibit automatic sleep and screen locking

- Display Brightness: 100%

- Power Profile: Power Save, Balanced, Performance
  - Performance mode is unavailable because the computer is running too hot.

- Battery: Not Charging 98%
  - Battery Health: 80%
Integration into Plasma

Energy Saving

- **On AC Power**
  - Screen brightness
  - Dim screen
  - Screen Energy Saving
    - Switch off after 5 min
  - Suspend session
    - Automatically: Sleep after 5 min
  - Button events handling
    - When laptop lid closed: Sleep
    - Even when an external monitor is connected
  - When power button pressed: Prompt log out dialog
- **On Battery**
- **On Low Battery**

- **Power management profile**
  - Switch to: Leave unchanged
  - Run script: power-saver, balanced, performance
Akku und Bildschirmhelligkeit

- Autom. Ruhezustand/Bildschirmsperre verhindern
- Bildschirmhelligkeit: 100%
- Power Profile: Power Save, Balanced, Performance
  - 2 applications have requested activating Performance mode:
    - Kate: Ultimate performance for editing
    - Dolphin: Browsing flies really fast
- Akku: Wird nicht geladen, 97%
- Alterungszustand: 80%
Thank you!