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# **Linux Kernel Development**

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# ACPI, Suspend/Resume

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- **Significant improvement in compatibility in last year**
- **Resolved ~250 bugs , and suspend/resume improved in terms of user experience**
- **Well recognized by kernel community**

# ACPI, Suspend/Resume

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## **The 2008 Linux Kernel Summit**

By **Jonathan Corbet**  
September 15, 2008

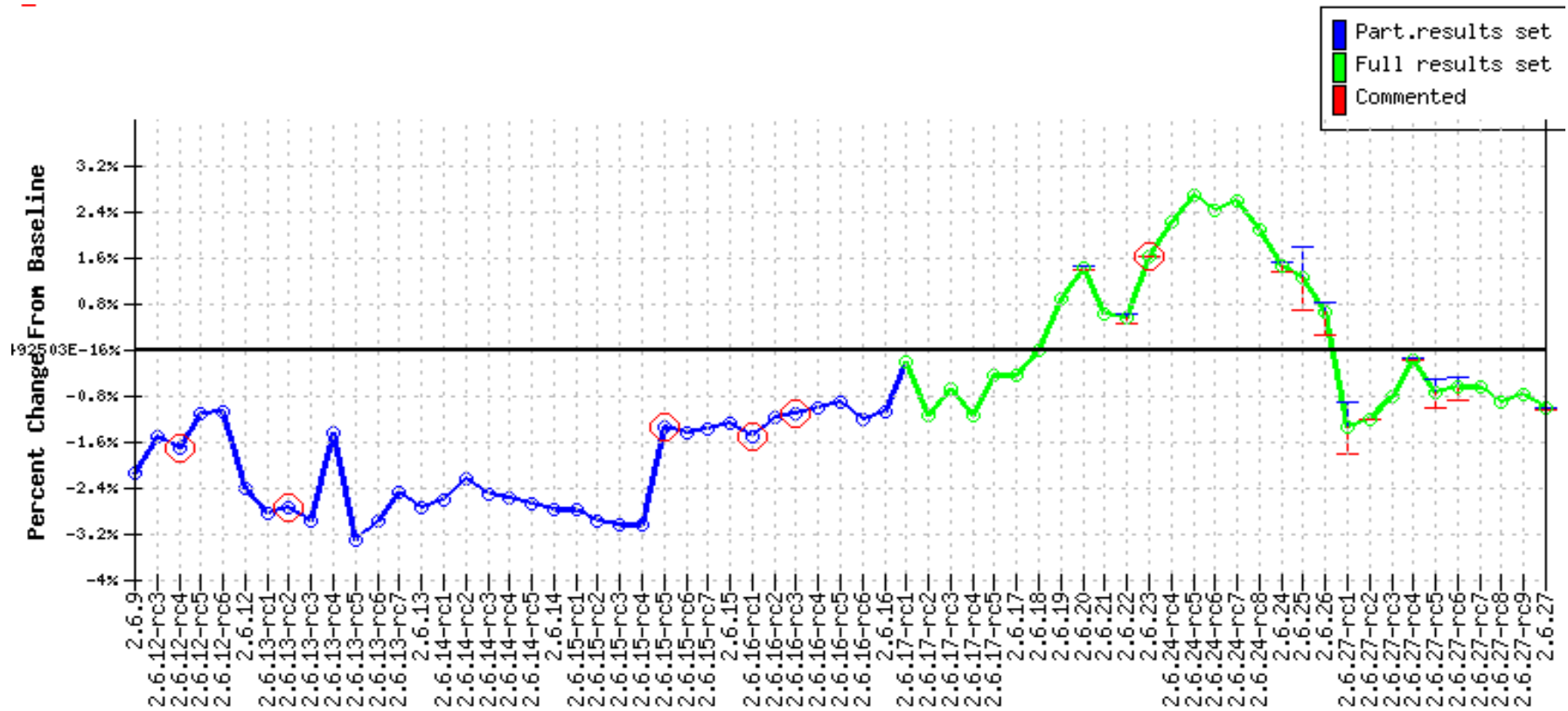
The 2008 Linux Kernel Summit was held September 15 and 16 in Portland, Oregon, immediately prior to the Linux Plumbers Conference. At this invitation-only meeting, some 80 developers discussed a number of issues relevant to the kernel and its future development. The following reports were written by Jonathan Corbet, who attended the event and was a member of its program committee.



Linus did ask the crowd how many people were still unable to suspend their laptops. The number of hands raised was quite small; things have clearly gotten better in this area.

- <http://lwn.net/Articles/KernelSummit2008/>

# Linux Kernel Performance



# Wireless stack and driver

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- **First open source WIFI stack: IEEE80211**
- **\$ git checkout v2.6.2X**  
**\$ wc -l drivers/net/wireless/iwlwifi/\*.ch net/ieee80211/\*.ch**  
**drivers/net/wireless/ipw2\*.[ch]**

v2.6.27: 75373

v2.6.25: 70531

v2.6.24: 64546 (iwlwifi first merged)

v2.6.23: 29356

v2.6.22: 29351

v2.6.21: 29283

v2.6.20: 29288

v2.6.26: 72585

v2.6.19: 29190

v2.6.18: 29050

v2.6.17: 28301

v2.6.16: 27868

v2.6.15: 28263

v2.6.14: 22950 (ieee80211, ipw2100, ipw2200 first merged)

## Other projects that we are involved

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- **PCI Subsystem – PCIE AER, PCIE ASPM**
- **Kexec/KDump and system hibernation based on this. Paper was published on the first China Linux Symposium.**
- **SystemTap**
- **UEFI firmware standard support**
- **Fast Boot/Fast Resume**

# Summary

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- **Using 2.6.27 kernel development as an example, our contribution is:**

572 patches, 73742 lines , ~0.5% of total change.

# Community Bridge

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- **Engage with worldwide community**

- 6 out of 9 OLS papers authored or co-authored by people from China so far, are from us
- One paper is accepted by LCA 2009.
- One invitation to Kernel Summit



# Community Bridge

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## Help to promote local community development

- **Assistance to COPU**

- contribution to China Linux Symposium, and two talks were accepted.

- **Academic**

- Linux kernel development training to the events organized by MoE targeting faculties in CS department and SW college. We help trained 300+ teachers from 40+ college in 3 years.
- Joint development of Linux kernel development course with SJTU and deliver the training ourselves in 3 consecutive years.

- **Engagement with local developers.**

- We co-found and sponsored AKA Linux Kernel Developer's Conference. This conference is the only event organized by local developers specifically for Linux kernel development.
- We are the first set of developers in zh-kernel mailing list and are still active on discussions and help beginners to ramp up on kernel development.

# Acknowledgement

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## Special thanks to:

- **COPU and Chairman Lu, Shou Qun**
- **Cosoft Secretary General Liu, Peng**
- **Cosoft Deputy Secretary General Yang, Chun Yan**
- **OTC Shanghai Engineering Manager, Feng Xiao Yan**
- **My great kernel development team members in OTC**

# Acknowledgement

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