

# **ioctl history**

**(or, the good, the bad & the ugly)**

**many problems cited**

**invites poor design**

**per-wireless device ioctl-based subsystems**

**not shell script friendly**

**32/64 bit compatibility is a pain**

**namespace clashes, pointer problems**

**has good sides**

**simple to use**

**good for exporting very device specific behaviors**

**tty, SCSI device specific ioctls**

# **ioctl alternatives**

**(or, the beehive)**

**proc**

**sysfs**

**foofs**

**netlink**

**new syscall**

**debugfs/relayfs**

**connector**

**sarea (binary mmap'd blob)**

**fops (poll, read, write, mmap, etc.)**

**open arguments (bcrl's patch)**

**additional device node for OOB data (suggested by Linus)**

**others?**

# **interface guidelines?**

**(or, how to navigate the thicket)**

**new in-kernel ioctl interface (Jan H., Petr V., Linus) to make compatibility easier & for improved safety/no overloading**  
**guidelines for appropriate interface usage**

**ioctls for simple, very device specific functionality**

**sysfs for exporting simple values, subsystem info**

**better subsystem coordination**

**relayfs/debugfs for copious output**

**lots of other stuff...**

**under what circumstances should a new ioctl be accepted?**

**other interfaces?**

**document userspace interface suggestions in**

**Documentation/?**