

オートモーティブ サミット
ジャパン2011



AUTO SUMMIT
JAPAN 2011

QNX in Automotive

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QNX in Automotive

- More vehicles (25 million) and models (275+) shipped than with all other platforms combined
- Telematics, infotainment, hands-free, and digital instrument clusters

QNX: the OS for every platform

Phones



Tablets



Automotive



QNX



Cloud

QNX CAR Application Platform



- Complete prototype-friendly and production-ready solution
- Pre-integrated software stack that includes production-proven technology and reskinable HMIs
- Quickly build rich infotainment systems
- Focus on value-added features rather than low-level technology



QNX CAR Application Platform is about:

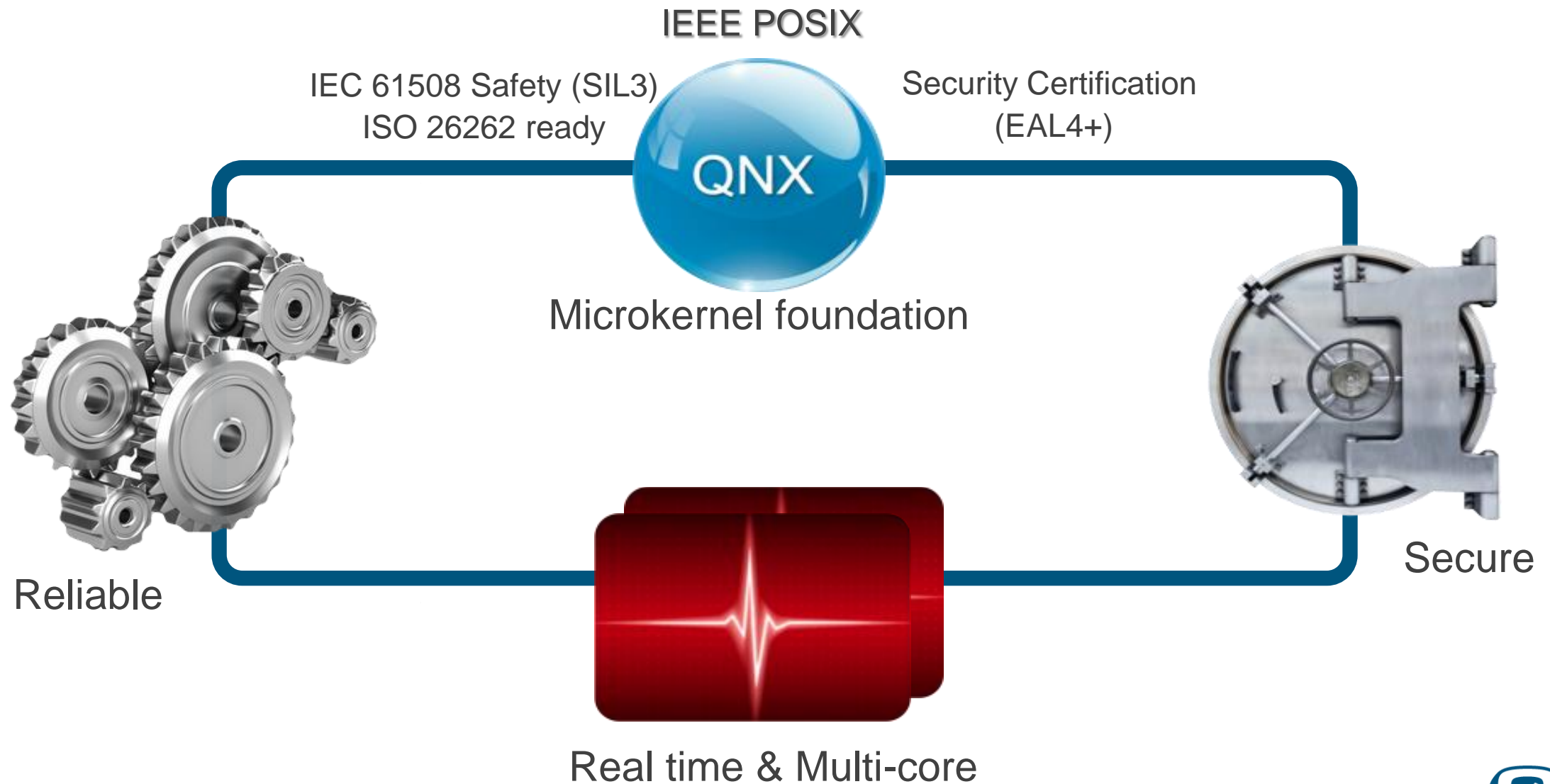
Increasing the innovation rate, compressing
time to market

Bringing smart devices into the car:
QNX, iOS, Android, ...

Building an application platform leveraging
the phone and tablet

Adopting the latest web technologies

QNX is your secure foundation





Rich runtime environments

The right solution for the right job

Native for performance

- Navigation, Voice, Digital Instrument Clusters, ...
- Smaller footprint

HTML5 for the future mass application platform

- Applications written in JavaScript and launched from the local file system or from the web
- Access operating system APIs and service interfaces from JavaScript
- App runs in its own process for protection
- App runs full screen - no browser chrome

Adobe AIR for a full tool suite

- Rich application development
- Complete Flash ecosystem
- App runs in its own process for protection



Webkit-based browser

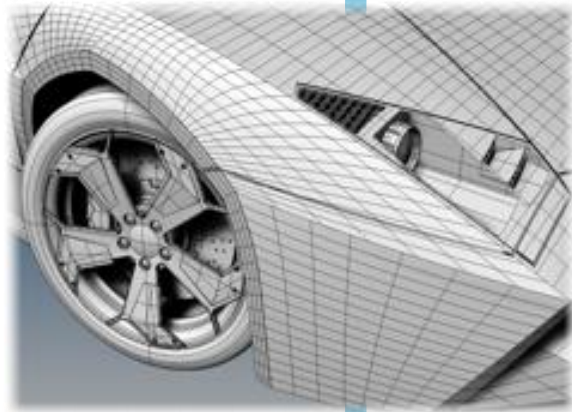
Support for HTML5 standards

- Audio and video (through QNX multimedia technology)
- Geo-location
- Canvas
- WebSockets
- Offline applications
- Session storage

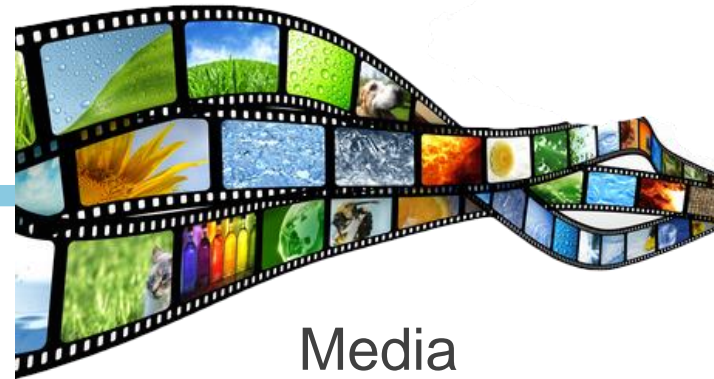
Enhanced browser features

- High performance panning and scrolling
- Pixel-accurate zooming
- Physics-based scrolling and panning
- Adobe Flash Player 11 plug-in
- JavaScript JIT

Hardware acceleration for maximum performance



OpenGL ES
1.1/2.0

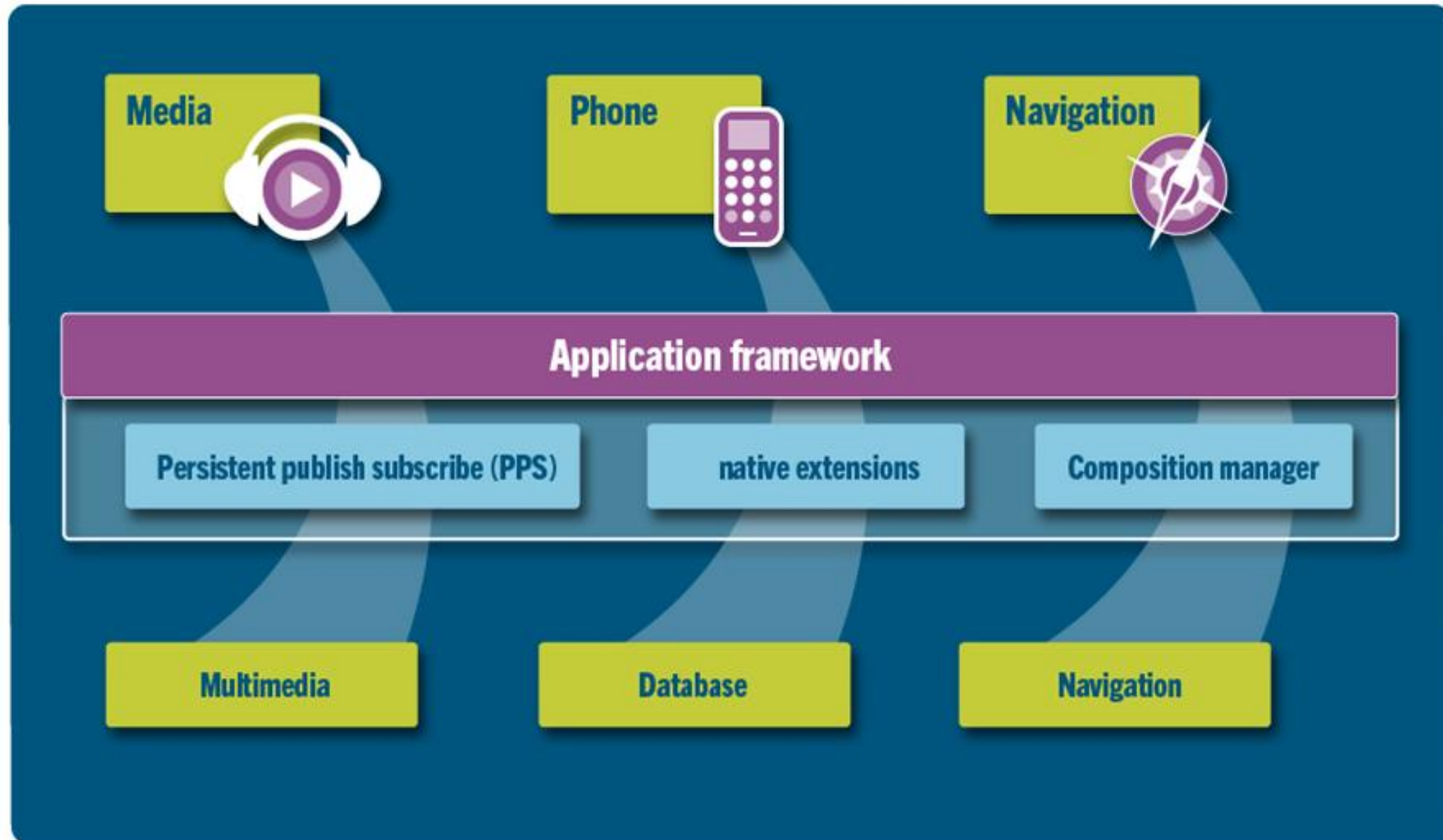


Media
H.264, WMV, MPEG2, ...

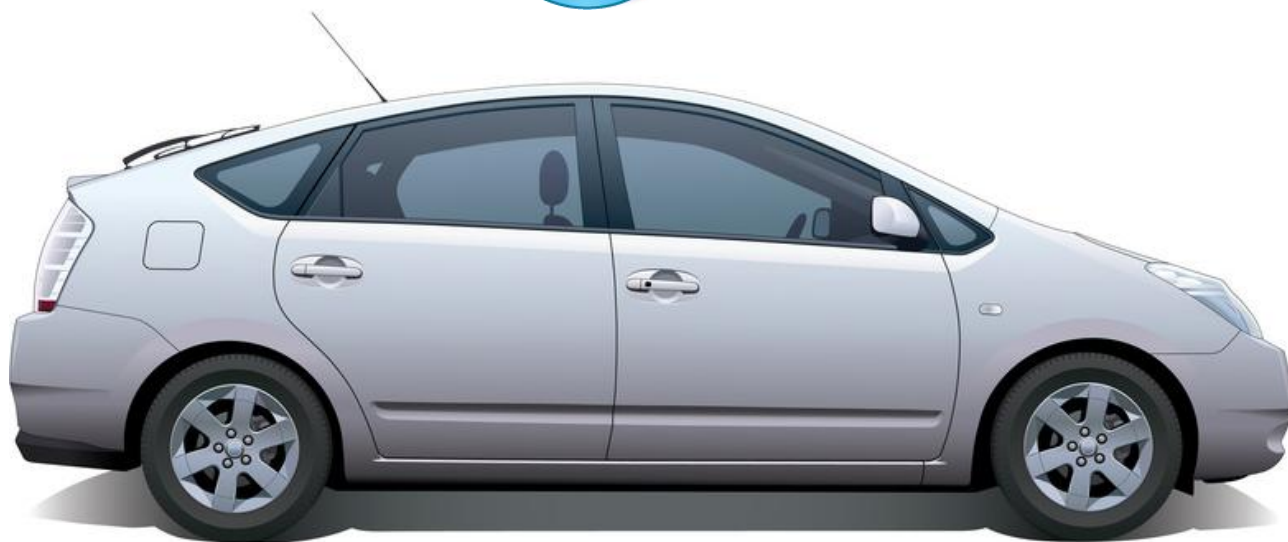
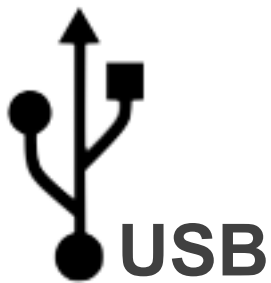


Composition

Application framework APIs



Your car and your devices



1101001001100011000011010011101001110100011010101101011010001101
0010101000110001100011001001001010101011001001111Internet1000
111100111100010011000110010100101000111000111000111 Apps
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QNX Acoustic Processing Suite 2.0

Release 2.0 hands-free core features

- Full duplex sound for natural two-way conversations
- Faithful voice reproduction for maximum intelligibility
- Noise reduction for improved clarity
- Unique technologies for improved quality on both ends of call

Additional features not found elsewhere

- Wind removal
- High-frequency encoding
- Bandwidth extension
- Full-featured diagnostics tools

Unique, patented algorithms – 80+ pending, 15 issued



Automotive services team

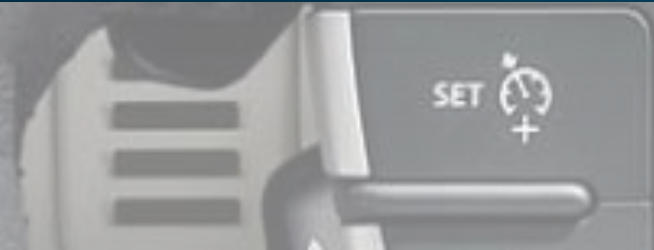
Experience: Hundreds of person years in development, support, integration

Expertise: All areas of in-car computing

Service excellence: 100 % success rate helping customers meet SOP deadlines

Commitment: Dedicated and dependable people

Increased ROI: Optimized performance on customer hardware, faster time to market




```
#define FLAG_IO_SHUTDOWN 0x0000000000000000LL
#define FLAG_IO_MMAP 0x000000000001000000LL
#define FLAG_IO_MSG int io_lock_ocr(resmgr_context_t *ctp, void *reserved, RESMGR_OCB_T *ocb)
#define FLAG_IO_WRITE 0x000000000004000000LL
#define FLAG_IO_DUP Enter("io_lock_ocr", FLAG_IO_LOCK_OCB, ctp,
#define FLAG_IO_CLOSE_DUP "ocb=tp", ocb);
#define FLAG_IO_LOCK_OCB 0x000000000001000000LL
#define FLAG_IO_UNLOCK_OCB 0x000000000002000000LL
#define FLAG_IO_SYNC 0x000000000008000000LL
#define FLAG_IO_POWER 0x000000000010000000LL

int io_unlock_ocr(resmgr_context_t *ctp, void *reserved, RESMGR_OCB_T *ocb)
#define FLAGS_CONNECT (FLAG_CONNECT_OPEN | FLAG_CONNECT_UNLINK | FLAG_CONNECT_RENAME | \
FLAG_CONNECT_MKNOD | FLAG_CONNECT_READLINK | FLAG_CONNECT_LINK | \
FLAG_CONNECT_UNBLOCK | FLAG_CONNECT_MOUNT)
Enter("unlock_ocr", FLAG_IO_UNLOCK_OCB, ctp,
"ocb=tp", ocb);
if (!ogreturn && default_io_funcs.unlock_ocr)
{
return default_io_funcs.unlock_ocr(ctp, reserved, ocb);
Leave("unlock_ocr", FLAG_IO_UNLOCK_OCB, ctp, retval,
**);
}
#define SETDISPATCH(tp, nm, flag) \
return retval;
if (monitor_calls & (flag)) { \
```

```
// Purpose: Converts a string of bytes/digits
// -----
int64_t get_value(const char *str)
{
int64_t total = strtoul(str, 0, 0);
int len = strlen(str);
char modifier;
BOOL bits = FALSE;

// We allow "bits" to be the last part of the string
// specify endianness as "little" or "big"
// TODO: localize this string
if (!strcmp(str+len-4, "bits"))
{
bits = TRUE;
}
```

“Dashboard 2.0” Wired

“The car of the future” LT Wire

“Future ride pimped with Internet” CNN Money

Application platform

- Rich HMIs • Comprehensive portfolio
- Responsive • Reliable • Connected
- Upgradeable

```

{"unlink", FLAG_CONNECT_UNLINK, 0},
{"rename", FLAG_CONNECT_RENAME, 0},
{"mknod", FLAG_CONNECT_MKNOD, 0},
{"readlink", FLAG_CONNECT_READLINK, 0},
{"link", FLAG_CONNECT_LINK, 0},
{"unblock", FLAG_CONNECT_UNBLOCK, 0},

struct agent_handle *ah;
// if the agent is not already attached, then attach to it
if(!(ag = agent_info(a)) || (ag->flags & AGENT_GLOBAL_SERVER) == 0) {
if((ah = agent_attach(0, a)) {
ah->global->flags |= AGENT_GLOBAL_SERVER;
(*count)++;
}
}

case 100:
case 101:
return 0;
}

if(pfunc) {
*pfunc = fd_ent->func;
}
if(pdata) {
*pdata = fd_ent->data;
}
return 0;
}

```

