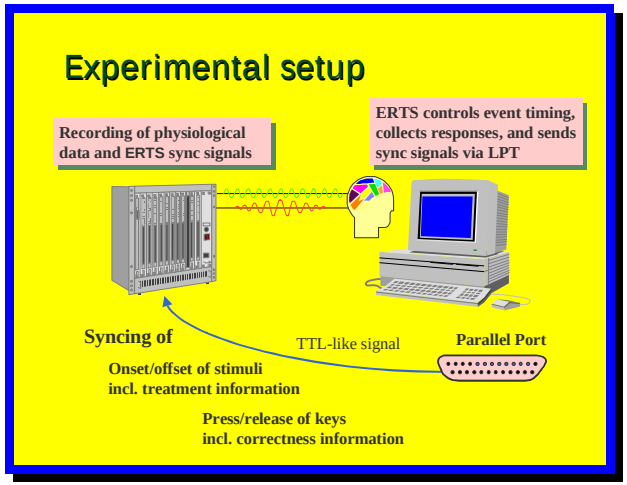

T*o run ERP studies just connect the eight data lines of the parallel port with a compatible 8-bit input channel of your EEG-recording device. This device must be capable of recording TTL-signals.*

E*vent timing as well as response registration are controlled by ERTS which runs on standard PCs under DOS. Sync signals are sent via the parallel port.*

B*esides synching the onsets of visual and/or auditory stimuli, you may also enable synching of key presses. In addition, the correctness of responses and the treatment condition can be coded by sending different values from trial to trial.*

new ERP commands

CE (Code Event)

The CE trial command sends a sync value with the next trial event. Use this command to sync individual events. Values may vary from trial to trial to code treatment condition.

CODEVENTS

This session command enables automatic synching of the most common events, e.g.:

- *Sending a reset value at the beginning of each trial*
- *Synching the begin of each response registration interval (typically the stimulus onset)*
- *Coding of the correctness of responses*

CODEKEYS

Use this session command to assign sync values to each response key. Whenever the subject presses or releases a key, ERTS will send the corresponding sync value.

ERTS ERP for

Event Related Potentials Studies

BeriSoft Cooperation
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mailto:Info@erts.de
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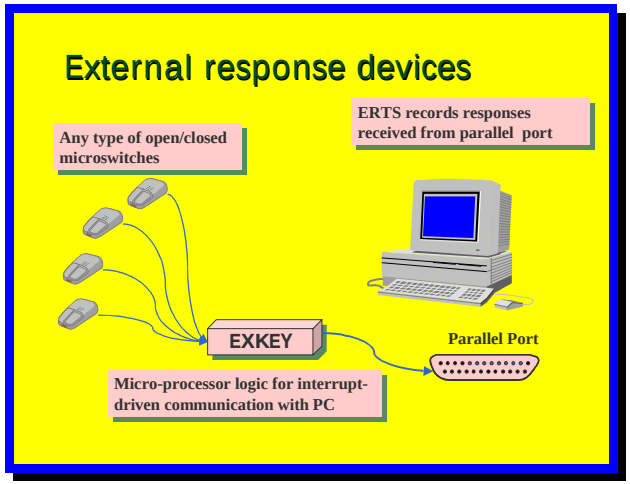
ERTS/ERP *is an extended ERTS version that supports sending of TTL-like sync signals via parallel ports.*

I*n a unique way, ERTS combines the flexibility of an easy-to-use scripting language with a very accurate DOS-run time kernel that gets the most out of your PC and your experiment.*

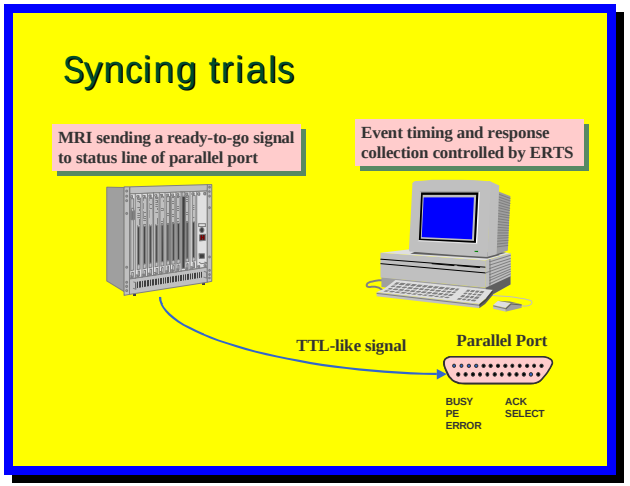
C*reate new experiments or take one of the many existing ERTS scripts and integrate sync signals where appropriate.*



Most ERP-studies require that response keys are separated from the computer and meet specific requirements.

For this purpose we have designed EXKEY, an external keyboard logic that is compatible to any kind of response devices that close or open TTL-circuits. EXKEY watches those input sources and transfers responses to ERTS via LPT.

Use this modular concept to integrate any kind of micro switch or one of our standard response pads into your experimental setup.

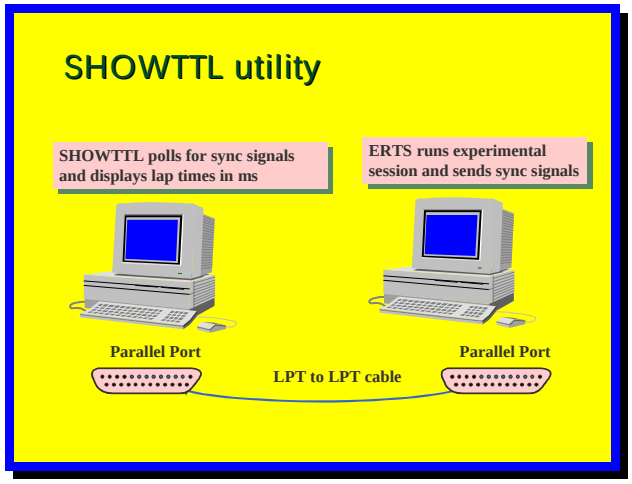


In some situations you might need to synchronize your trials with external sources, e.g. the ready-status of a MRI.

To achieve this in ERTS simply insert a WaitForPort command into the trial structure and connect an appropriate signal to one of the status line of the parallel port.

This command will poll the status of the parallel port until the required status is recognized.

When connecting the external MRI signal to EXKEY, ERTS can use it as an counter tic for synchronizing events and trials to MRI scan periods.



The SHOWTTL utility enables you to monitor timing characteristics of ERTS sync signals on a second PC. Just connect the parallel ports of two PCs and run SHOWTTL on one while running an ERTS session on the other PC.

All changes at the port will be displayed including lap times in milliseconds. This way, you can easily check correct timing outside of your EEG-lab.