

Three.js end-to-end testing

Motivation

Simplify code reviews with quick pixel testing inside CI. The same screenshots are used for thumbnails.

Local usage

If you get an error in e2e test after PR and you sure that all is correct, just make a new screenshot to example. As a last resort increase timeouts or add it to exception list.

```
# generate new screenshots for exact examples
npm run make-screenshot <example1_name> ... <exampleN_name>
```

```
# check exact examples
npm run test-e2e <example1_name> ... <exampleN_name>
```

```
# check all examples
npm run test-e2e
```

Merge only those commits that pass the tests, otherwise all next commits will also fail.

How it works

- ci configs with parallelism
- deterministic random/timer/rAF/video for screenshots
- increased robustness with hided text, datgui, different flags and timeouts.
- pipeline: turn off rAF -> 'networkidle0' -> networkTax -> turn on rAF -> render promise
- added 3 progressive attempts for robustness

Development progress

| Travis | Attempts |
|--------------------------------|-------------------------------------|
| 61 from 362 failed, time=21:14 | networkidle0 timeout |
| 26 from 362 failed, time=16:22 | with rAF hook |
| 13=1+1+7+4 failed, time=4:26 | with render promise and parallelism |
| 4=0+0+2+2 failed, time=5:13 | with network tax and other settings |
| 4=0+0+2+2 failed, time=3:26 | with progressive attempts |

Status

97% examples are covered with tests. Check exception list for more information.