Ajax example:
network clock

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a network clock

- gets current time from server, and displays it
- maintains display with periodic refresh

05:09:05
challenge

how to compensate for network delay?
› measure round trip time
› keep trying until less than required tolerance
› then update using deltas from client clock
design

protocol
› request time from server
› if obtained quickly enough, display & start updates
› if not, try again (up to some number of tries)

how to do this?
› request time with Ajax
› but how to sequentialize the requests?
main code

```javascript
measurement.valid = false;
var MAX_TRIES = 10;
var try_get = function(tries_left) {
    return function() {
        if (tries_left > 0 && !measurement.valid) {
            getServerTime(try_get(tries_left - 1));
        } else if (measurement.valid) {
            //... update display & start refreshing
        }
    };
};
try_get(MAX_TRIES)();
```

› what kind of object is `try_get(tries_left-1)`?
get server time

```javascript
var measurement = {server_time: 0, client_time: 0, valid: false};

var getServerTime = function (continuation) {
  var callback = function (response) {
    var response_received_time = getClientTime();
    var round_trip_time = response_received_time - response.request_time;
    if (round_trip_time < tolerance) {
      measurement.valid = true;
      measurement.server_time = response.server_time;
      measurement.client_time = getClientTime();
    }
    continuation();
  };
  var params = {request_time: getClientTime()};
  $.getJSON("/get_time", params, callback);
};

› note how continuations thread Ajax calls together
```