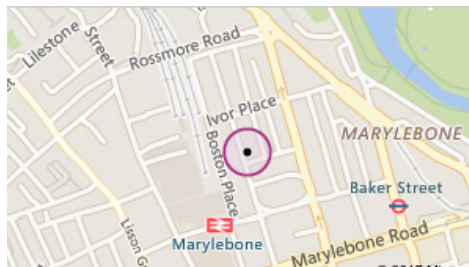


The meeting on Monday 9 April 2018
will be downstairs at the
Sir John Balcombe Balcombe Street
London NW1 6HE



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Current special offers

- Disk Drill PRO: 30% Discount
- Teams ID, a Password Manager for Teams: 33% Discount
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- SlideShark iPad PowerPoint Viewer: Free App plus Offer

This month's LMUG Meet-Up is our
Annual General Meeting - your chance to
shape LMUG for the future.

We welcome new ideas and new people.
New committee members are always
welcome. Note that our social media post is
vacant... Should you wish to volunteer for the
committee please forward your name to the
secretary.

7pm - Newsbyte - our monthly review of
Mac, iOS and tech highlights.

730 - Bar Break, and Sale of raffle tickets.
Tonight's prize is a 256GB Solid State Drive.
8pm ANNUAL GENERAL MEETING

Agenda as below

1. Apologies for absence
2. Minutes of 2017 AGM (tabled)
3. Chairman's Report
4. Treasurer's Report
5. Election of Committee Members.

Secretary - Tina Jacobs

Treasurer - Pietro Falcone

Membership Secretary - Pietro Falcone

Webmaster - Craig Jobbins

Newsletter - Maurice Baker

Technical Officer - Alastair
Whitehouse
Communications and Social Media -
Vacant
Committee Member - Martin Kelly
6. Any Other Business
Questions from the floor

Better than the Printed Page: Reading on an iPad

Apple's Web site makes the iPad sound like a gift of God for graphics, but the company hardly mentions the iPad's main purpose for some of us: reading books. Nor I have ever heard of anyone who switched on a new iPad, saw the screen, and exclaimed: "What a pleasant way to read! Surely I ought to empty my bookcases and put all of my books onto this."

I suspect the marketing moguls at Apple do not care much about reading books, because if they did, they could set it up to induce that reaction. Indeed, after fiddling with the settings and buying some cheap apps, my wife Daphne and I both find ourselves preferring the iPad to paper. Not only do we buy ebooks by choice, we have even found ourselves buying ebooks to replace hardcovers on our shelves, because reading on the iPad is quicker and easier.

We have optimized the iPad for reading by working with our knowledge of visual perception. Daphne is a prominent visual scientist and I have worked and written with her extensively. In this article I shall share our approach.

Black on White -- To begin I feel obliged to point out the obvious — or at least what ought to be obvious but appears not to be in the curious world of Web designers: our brains are built to read black on white, not white on black. From the first day of life we prefer dark-on-light and the preference never stops. It is built into the brain. However old you are, and however much experience you have had viewing photographic negatives or working on ancient video terminals, your visual system will still find it easier to process black on white.

This preference does not stem merely from custom and familiarity. You can see this in the pictures below, where all of the colours are bizarre. The colours are so bizarre that familiarity is not a factor; yet the dark-on-light portrait on the right is easier to identify. Although light type on a dark background may look spiffy, and you may have managed to get used to it, it is intrinsically more difficult to read.



Unless you want to read in the dark, don't waste your time with white type on black. If you see a Web page designed that way, tap Safari's Reader button — the stacked bars that sometimes appear at the left end of the address field.

However, that button is often unavailable or fails to capture the whole page, so it is sensible to set up an alternative to keep at hand, a "bookmarklet" that runs a JavaScript to redisplay the page sensibly. Bookmark some page — any page — and put the new bookmark in the Favorites bar. Tapping this Clarify bookmark will not bring up a new Web page. Instead, it will usually (JavaScript permitting) reload the current page with black type on a plain white background. This makes almost any white-on-black Web page easier to read unless it depends upon white graphics or white controls. It ought to work in any browser on any device.

Brightness -- I now hear somebody grumbling in the background: "But the white screen of an iPad is hard on my eyes." Yes indeed, it can be hard on the eyes. It must be tamed. Paper reflects about 90 percent of whatever light strikes it, but the iPad's glow is constant and often brighter than anything else indoors. It must be matched to the ambient brightness. Unless you are outside, when the screen may not be bright enough, you will likely need to reduce the iPad's screen brightness by a lot. iOS's automatic screen dimming can do this to a certain extent, but I frequently find my finger fiddling with the brightness slider in Control Center.

Tint -- Diagrams of the brain are usually overly simple. They show one function here, another function there, and no interaction between them. The reality is complex. Neurons fire more like shotguns than rifles, so neuronal activity spreads broadly. To one extent or another, different parts of the brain commonly interact.

One such interaction is between areas perceiving colour and areas perceiving lines. These interactions can affect reading. Unfortunately, this is a topic that has seen extravagant claims, sloppy research, and scientific interest damped by patents in North America. However, some good research has come out of the UK, largely by Arnold Wilkins. Wilkins has shown convincingly that real interactions do exist, and these interactions affect a large minority of the population. Little else is from

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known for sure but:

Coloured overlays can help many people read the printed page.

Tinted computer screens can help many people read a display.

Tinted eyeglasses can help many people read anything and/or can lessen migraines.

The tint will be unique to the individual.

To see if you may be helped by a tinted screen, I created this test using colours that Wilkins suggested. It's a rough electronic equivalent of a test he developed using transparent plastic overlays. Click through its different colours. If one of them makes the text clearer or more stable or easier to read in any other way, then tint your iPad's screen. Don't expect to duplicate the colour of the test exactly — it's just a starting point — but fiddle with the hue and intensity sliders in Settings > General > Accessibility > Display Accommodations > Color Filter.

Most likely you'll see no difference on the test, but if a colour makes the text stabler or clearer or easier to read, you might also benefit more generally from tinted eyeglasses, especially if you get migraines from time to time. In the UK, many opticians prescribe and dispense tinted lenses inexpensively under the National Health Service, based on technology that Wilkins developed at Cambridge University. Outside the UK this technology is available sparsely, but a sales force set up by Helen Irlen is ubiquitous. See Cerium and Irlen.

Matching Light -- If you see no difference with the colour test above, you can still make reading more comfortable by matching the colour of your screen to the colour of the ambient light.

To see how much ambient light varies in hue, take a look at the photo below. It shows the light I see in the background while reading in my easy chair. Cloudy days see all of the window shades up and all of the colours cool; sunny days see all the shades down and all the colours warm; nighttime sees no sunlight at all, just light from lamps that are warmer still. The colour of light doesn't matter at all when reading paper, because paper always reflects the ambient tint, but if a screen glows a different colour than the background, it will distract.

Apple's True Tone control in Settings > Display & Brightness is supposed to modify the display's colour to match the ambient light. It provides a modest improvement, but the iPad's

default tint is unlikely to be ideal. You can tickle this default in Settings > General > Accessibility > Display Accommodations > Color Filters. For me, what works best is to slide the hue slider rightward one-eighth of the way.

Also, True Tone never makes the screen warm enough to match artificial lighting at night. To warm the screen more at night, I schedule Settings > Display & Brightness > Night Shift to sunset-to-sunrise, and I slide its colour-temperature slider two-thirds to the right.

Reading -- When you look around the world, your eyes do not see all that you perceive. You stare for a half-second or so at one spot then move your eyes suddenly to another. While you fixate on a spot, your eyes see a small spot of sharp lines surrounded by a ring of blur; between the fixations your eyes see nothing. Almost all that you perceive, your brain infers rings of blur:

This holds when you are reading too, which has significant implications for the layout of a page. The illustration below shows circles of text your eyes might see clearly enough to read while scanning the first paragraph. At the bottom, I've copied the text from the first paragraph contained within each circle. This is the information your eye might have picked up.

Here is the same text laid out in a column. Here each circle presents more of the text, and the circles overlap, so more of the meaning comes through.

Of course, in neither layout could your brain process all of the text at once. In both layouts, your eyes will zigzag across and down the page. However, every fixation on the vertical layout feeds the brain more information than any fixation on the horizontal, making the words easier to process.

On the other hand, these are individual words and meaning comes more from phrases than from words. Phrases are the molecules of language, words are merely atoms. Thus, the optimal width of a column is determined by how clearly it presents phrases, not words. This varies with the complexity of the text.

At one extreme is
a modern newspaper:
Newspaper prose
builds simple words

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**SoundByte is the newsletter of the London Mac User Group.
It is produced solely by, and for, LMUG members.
LMUG Committee 2017/18**

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Ideas & Suggestions	suggestions@lmug.org.uk. Website: http://www.lmug.org.uk

Continued from page 3

into short phrases,
so narrow columns
display them well.

In contrast, the considerate cadences,
the sesquipedalian and Latinate vocabulary,
and the archaic usages and structures
of Georgian literature — all of these several
attributes condense and assemble themselves
within the brain most sensibly and clearly
when traced by the eye across broader lines.

Newspapers and magazines often use columns
appropriately but books seldom do. That's because
the layout of a printed book is optimized not for
readability but for sales. A publisher can sell X copies
if he can keep the price to \$Y, but that requires using
a small, thin font at its default spacing with minimal
margins, and filling the page with text. Moreover, to
sell in a shop the book needs to look attractive, so
the text will be justified neatly on the right.

None of this is good for reading. A larger and
possibly thicker font would be more legible. The
default spacing of type is the minimum possible but
reading comfortably requires some space between
the lines. Justifying the right edge of text requires
varying the spacing between words and letters, a
variation that's a form of noise the brain needs to
ignore.

On an iPad, I can adjust all of those parameters
and more, not with iBooks but with the third-party
app MapleRead. I can also switch off hyphenation
so that the eye does not need to process broken
words. The next two screenshots show how I set
it up for two different books: a serious history
(horizontal) and a modern novel (vertical). The font

is Futura. To my eye, Futura is the clearest for
full pages of text on an iPad (although not
on my Macintosh), but your eyes will differ;
so experiment with different fonts. Some of
Arnold Wilkins's work suggests that Verdana
would be a good font to try.

MapleRead is designed to read books in
EPUB format. That is the standard, generic
format for ebooks, the format used by virtually
every source of ebooks other than Amazon.
Amazon uses the Mobi format for its Kindle
books. Both formats are similar under the
hood but Mobi is locked to Amazon's products,
so if an ebook I want is available only from
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cross-platform shareware product called
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computer, where they are automatically backed
up, and sends them to my iPad either by mail
or over the Web.

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That is my situation living in Canada.

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