

the android webview

niels leenheer - phonegap day eu 2015

what is a webview?

a system level component for
displaying html in applications



up to android 4.3,
the webview was
based on webkit

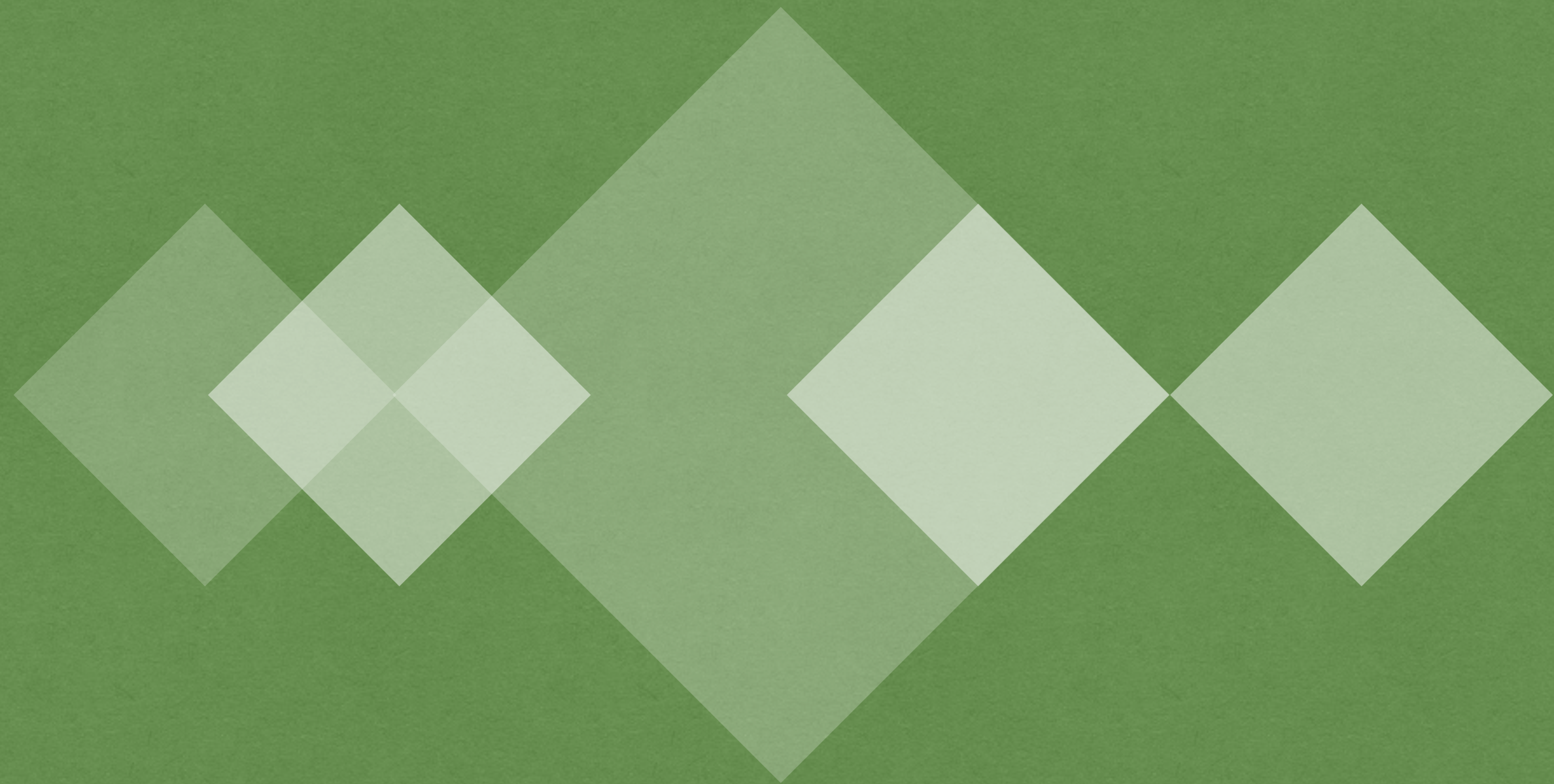


android 4.4 and later
use a webview based
on chromium



the old webkit webview has
not been properly updated in
the last four years

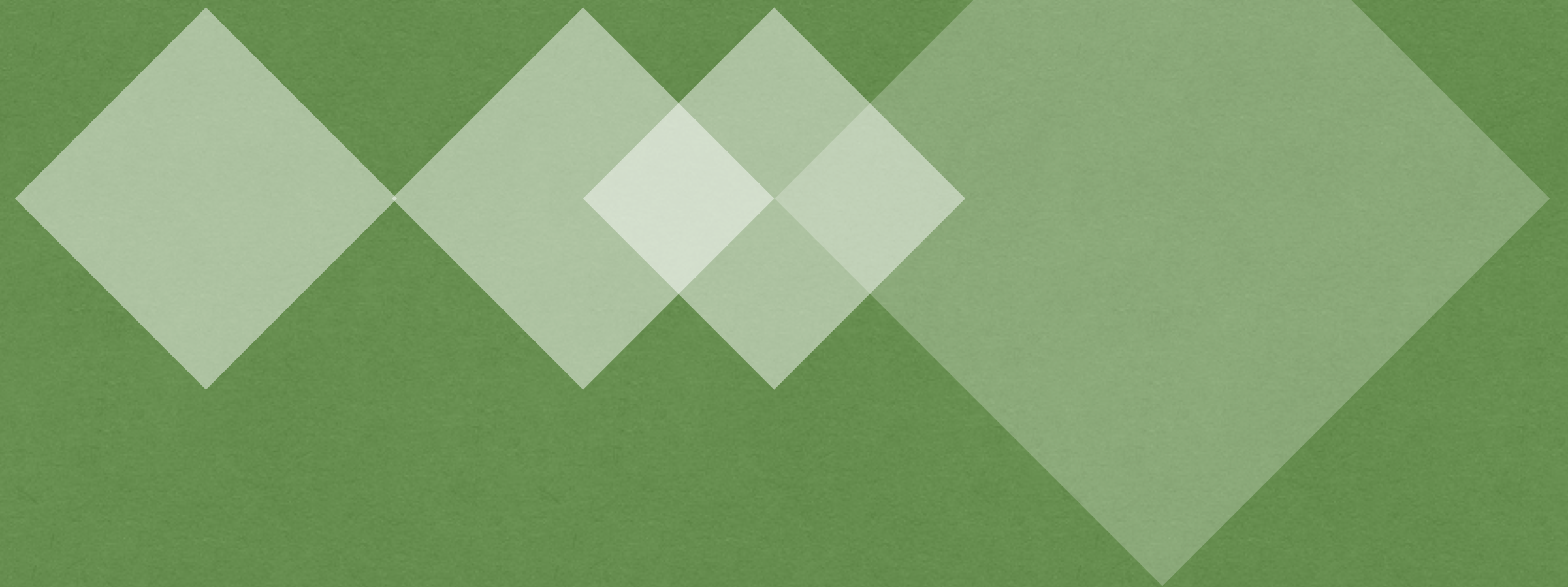
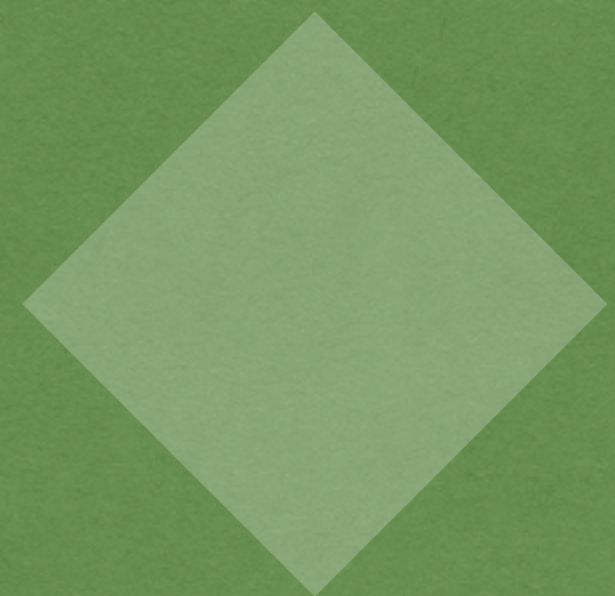
almost no changes between
android 4.0 and 4.3





the webkit webview is slow and has outdated standards support

its standards support can be compared to ios 4 or 5





the chromium webview is not only much faster, it has much better standards support

at the same level or even better standards support as ios 8



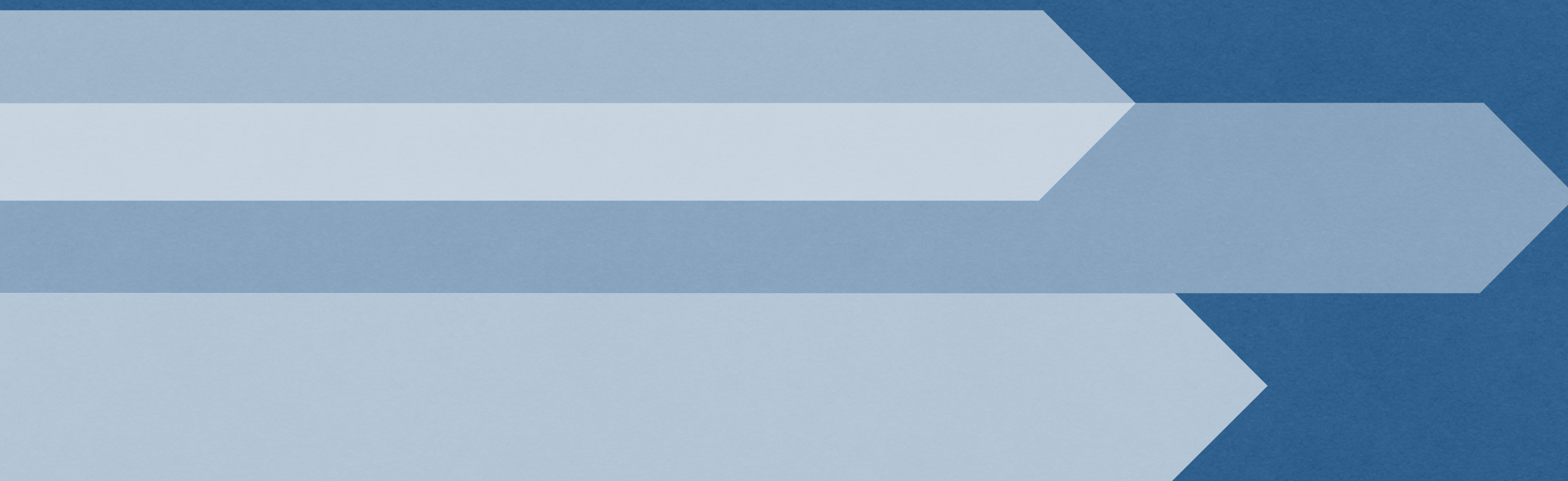


the chromium webview will
be updated regularly

android 4.4 → chromium 30

android 4.4.3 → chromium 33

android 5 → chromium 37 or higher

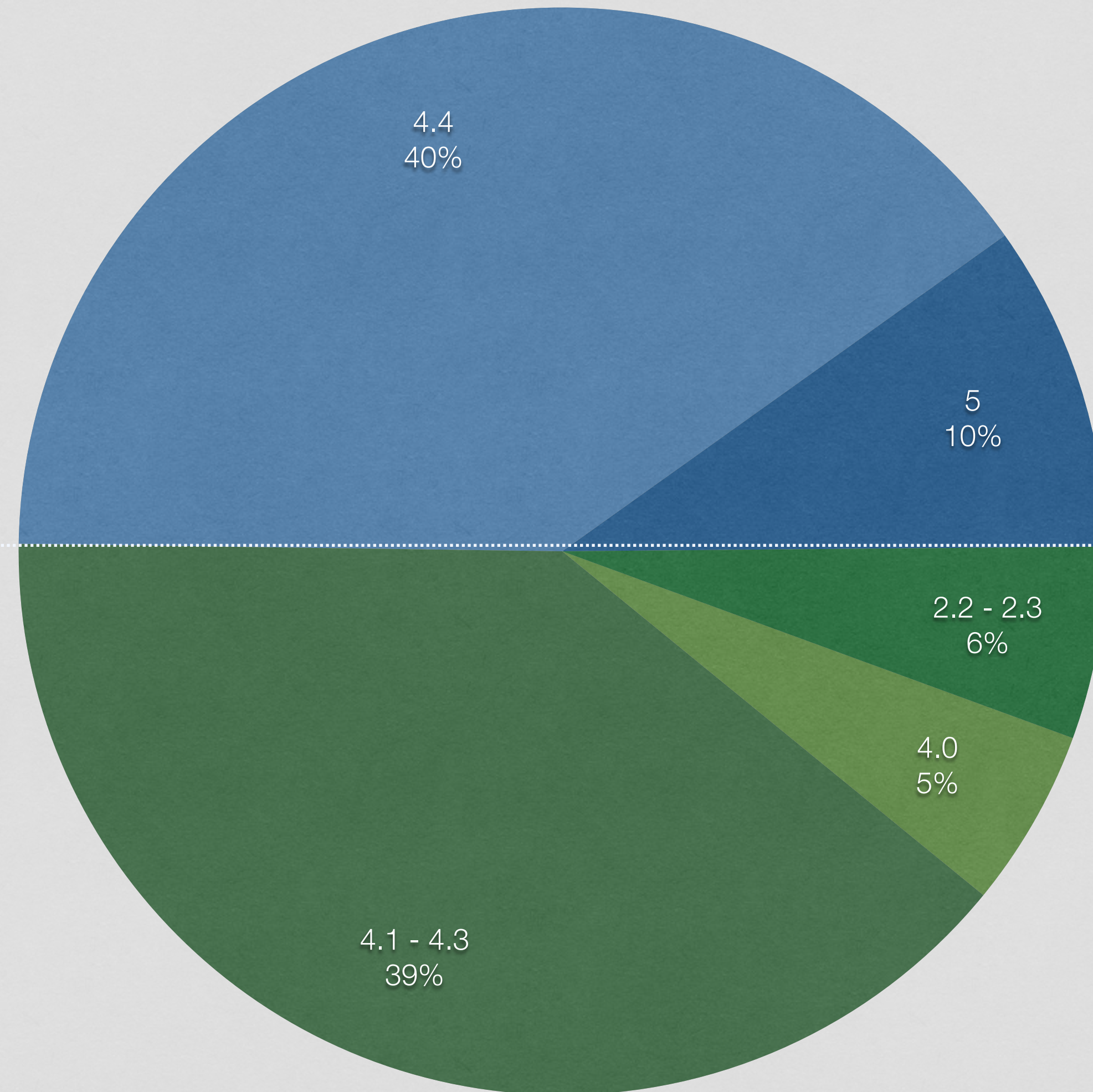




in a couple of years all android phones will have the chromium webview

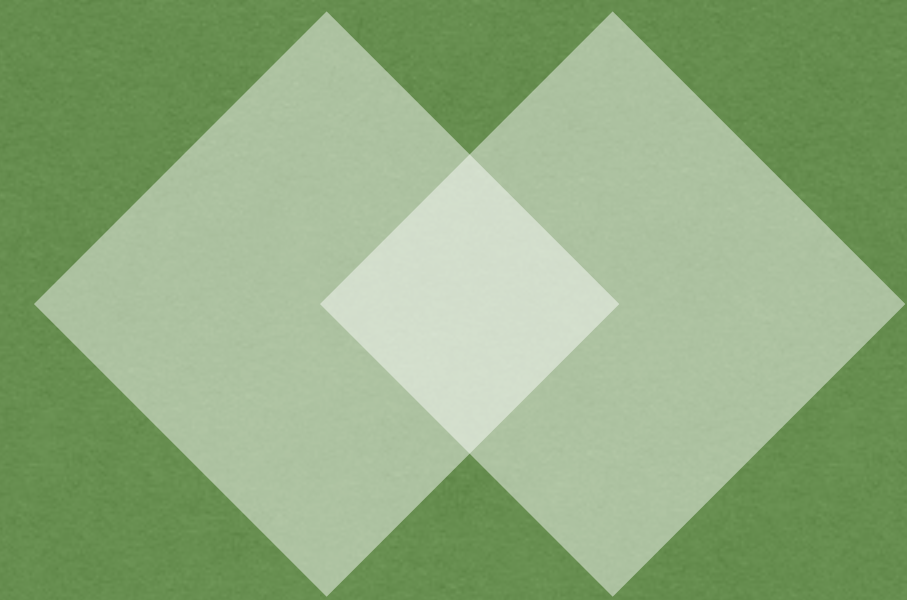
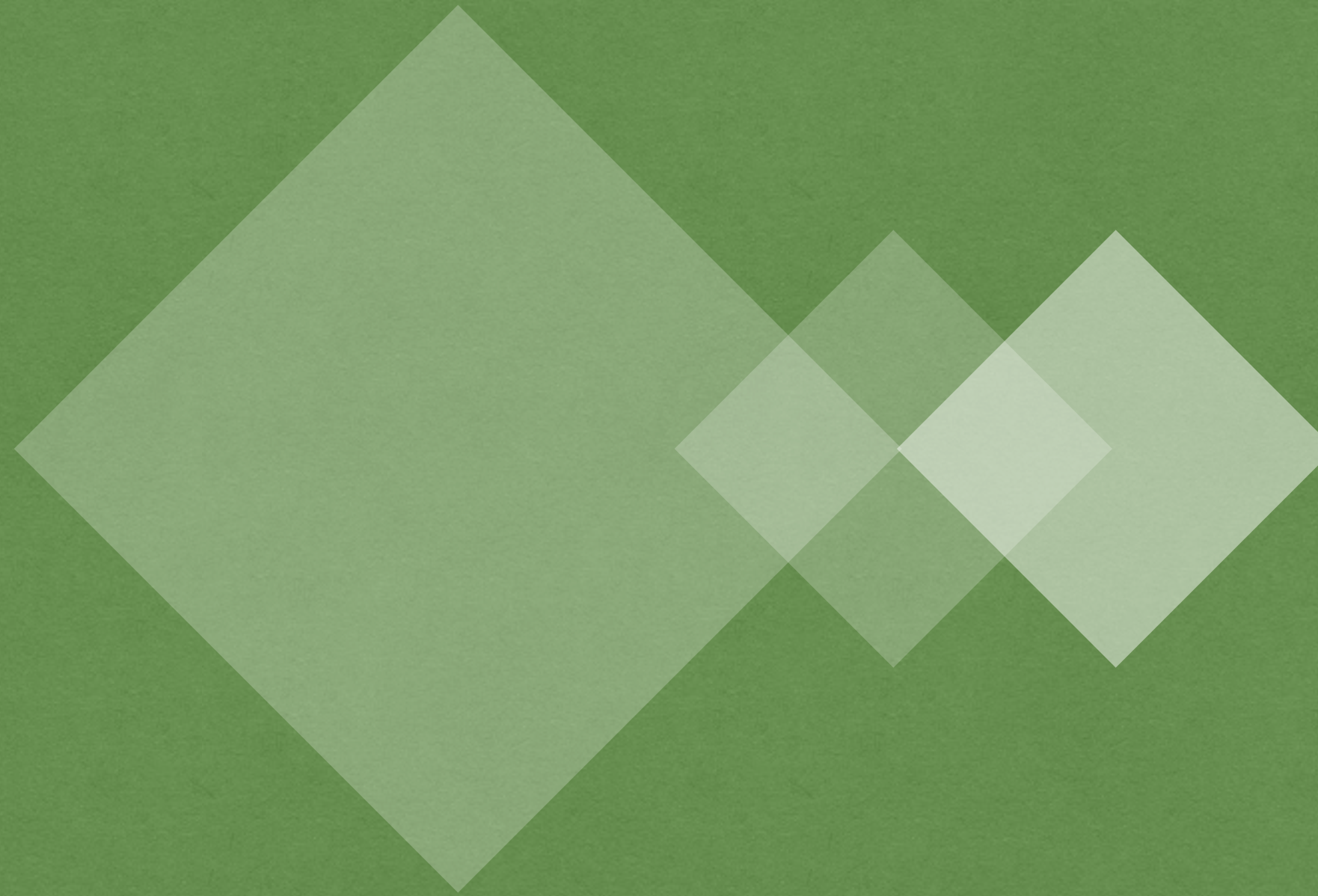


but today we still have to deal with
the webkit webview





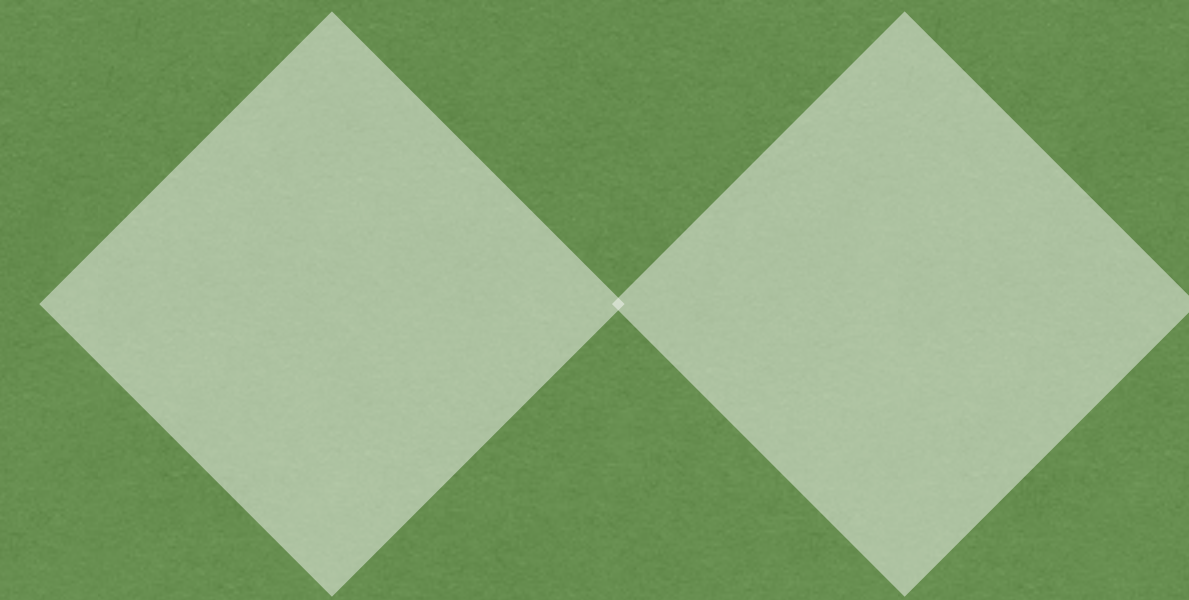
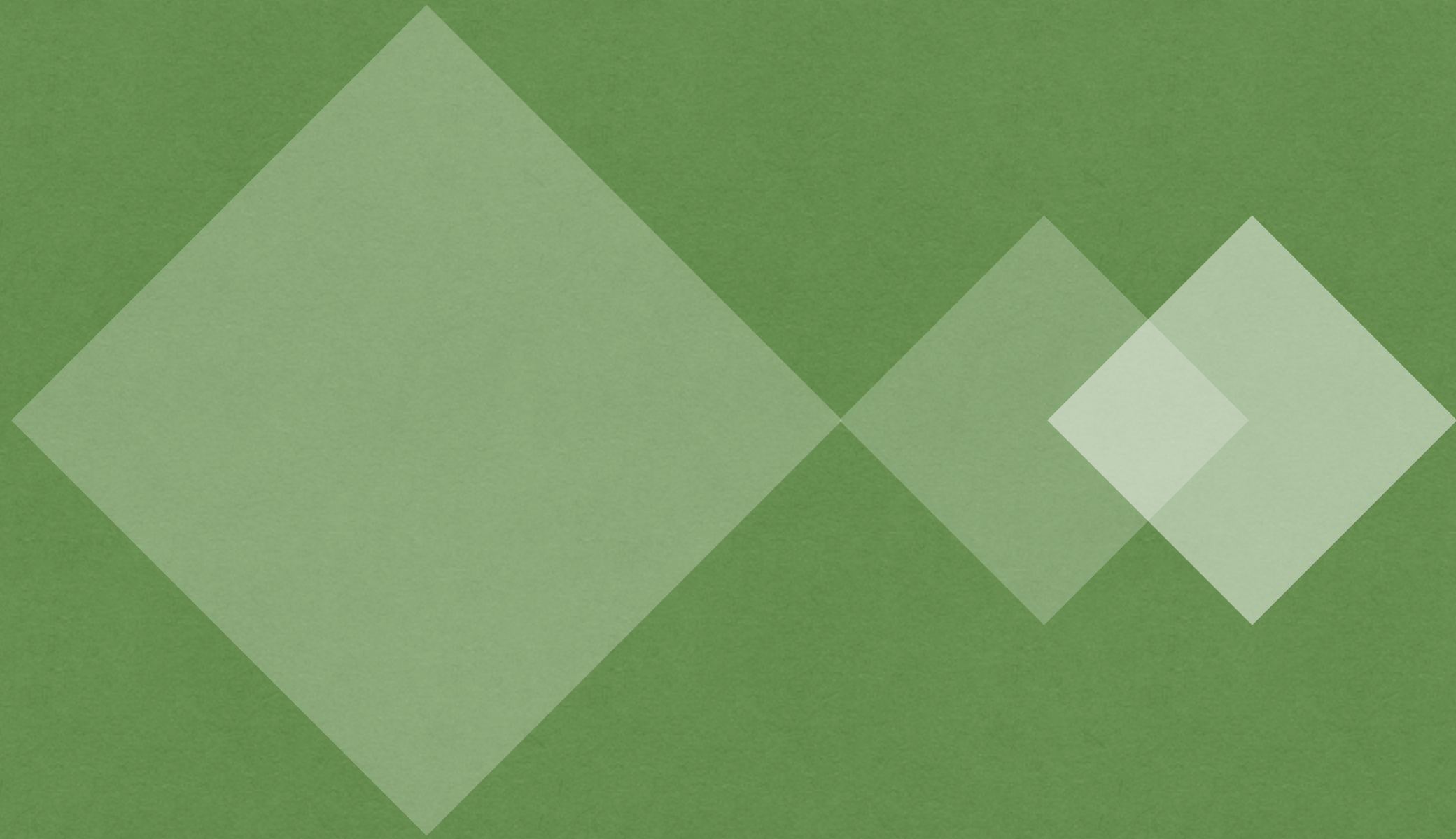
but unfortunately we are not
dealing with just one webkit
webview





device manufacturers improved
the default browser

differentiation by having better
standards support than your
competitors

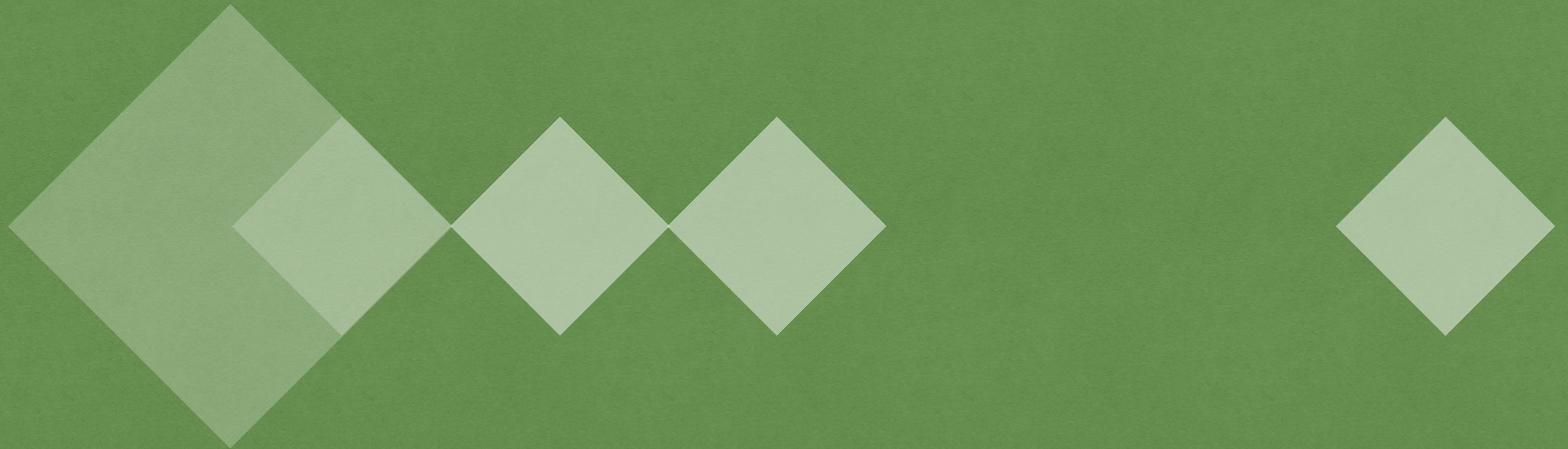


differentiation is just
a pretty name for
fragmentation



the reality is that we now have many different webviews that all behave slightly different

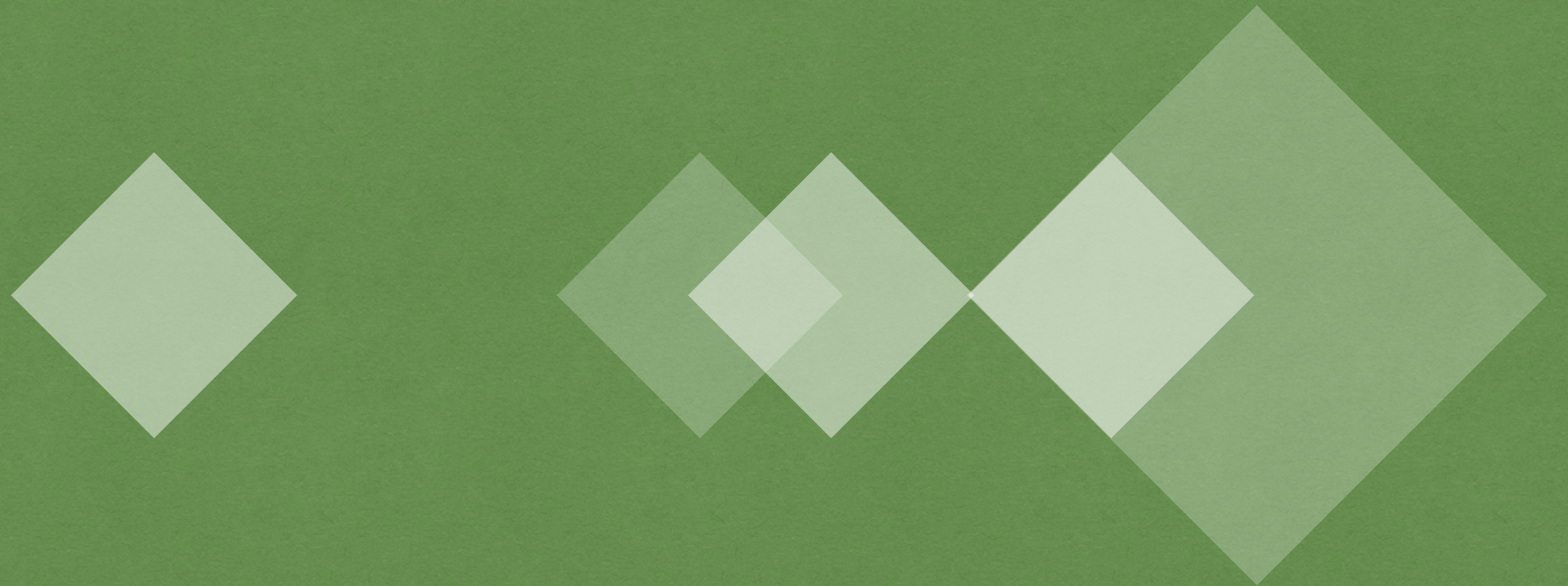
not only different versions of webkit, but also different features enabled





better standards support is
useless if it is only available on a
subset of devices

apps still need to be build for the
lowest common denominator



webgl

form field types

webaudio

indexeddb

requestanimationframe

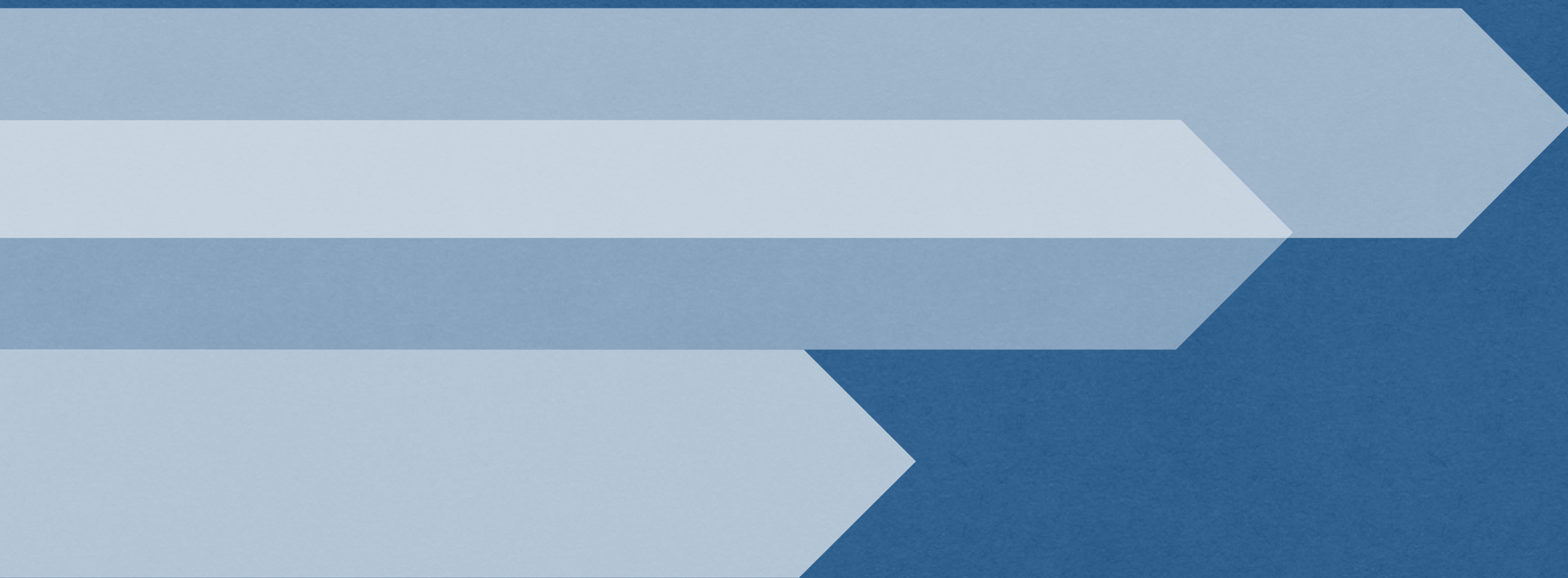
websockets





having frequent updates is not
always good!

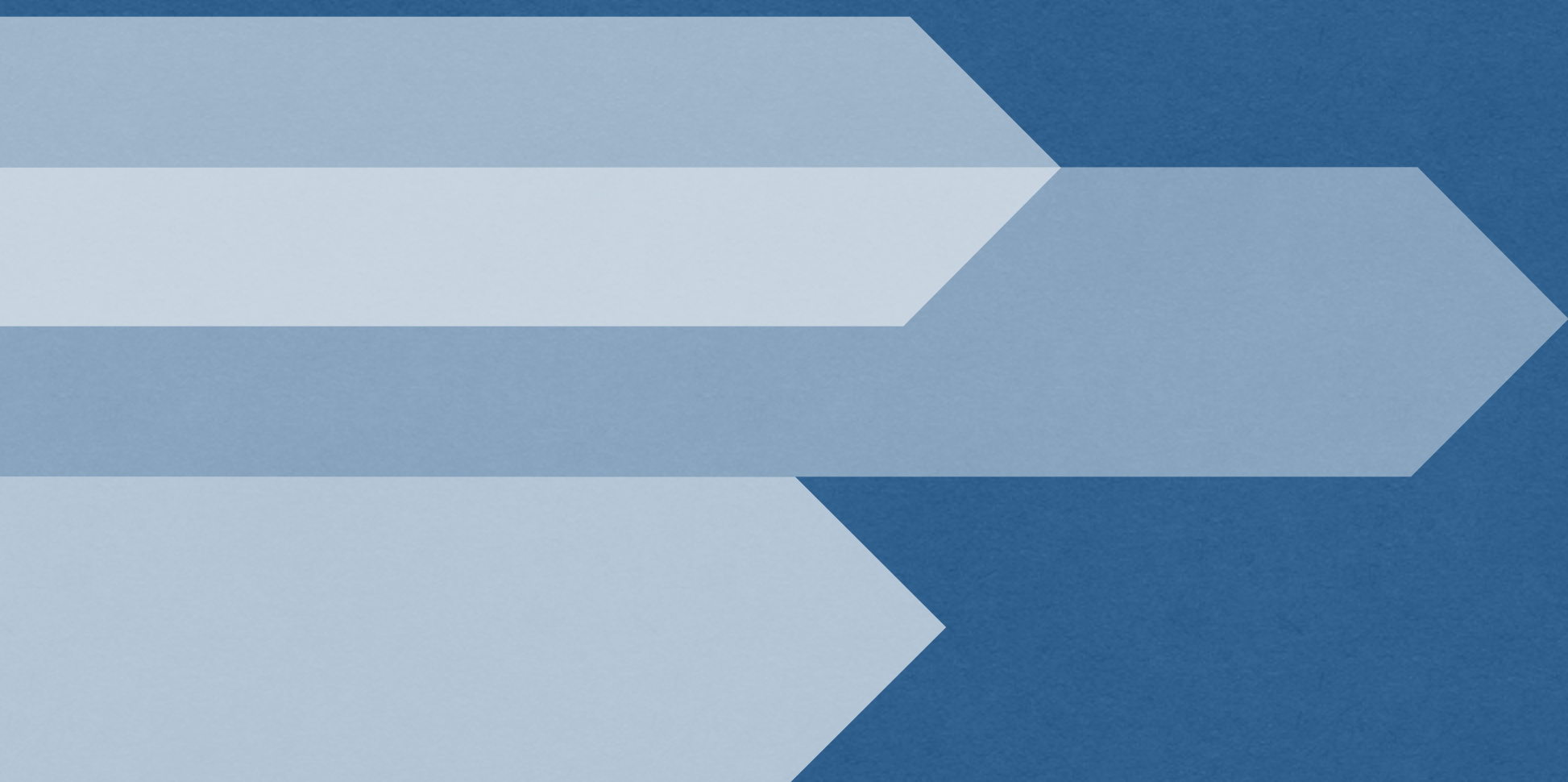
removing older apis and features
can cause legacy apps to break





some devices will never get an upgrade to android 5

chromium 30 and 33 based webviews will be around for the next couple of years





bad performance
limited standards support
vendor specific versions



better standards support
limited control



fragmentation

how to deal with this mess



test

as often as possible,
on as many devices as possible

perhaps try an
open device lab?

144 labs across 34 countries
and 4002 devices available



test

as often as possible,
on as many devices as possible

but there is also
another solution



crosswalk



thank you

@html5test