



From legacy to new - the Anfield approach

simply brilliant thinkers
making software brilliantly simple





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Principal Software Developer
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Back in **October 2015** we were asked to undergo a complete **platform review** of the existing **DesignSpark** platform with a view of taking over development

DESIGNSPARK

- Provides free tools to help 'make those big ideas happen'
- Community site for engineers
- Allows engineers to share articles, ask questions, seek answers, follow topics they are interested in, and follow other engineers

- HOME
- AUTOMATION
- DESIGN CENTRES
- SOFTWARE
- DESIGNSHARE
- 3D & PCB MODELS
- BLOG
- FORUM
- TOOLS
- RS UNIVERSITY
- PRODUCTS & REVIEWS

DESIGNSPARK - HOME

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CHOOSING THE RIGHT FUSE

The Eaton Bussmann series is the new name for Cooper Bussmann fuses. Finding the right fuse has never been easier with their new app. [READ](#)

TOOLS *Free tools and apps for engineers*

- DESIGNSPARK PCB
- DESIGNSPARK MECHANICAL
- TOOLBOX APP
- PRODUCT DATA LIBRARY
- MODELSOURCE

ACTIVITY STREAM CENTRE

COMMENTS 28 minutes ago
[RF Communications and the Internet of Things - Part 3](#)

REPLY 1 hour, 8 minutes ago
[Re: Corrective errors found by DRC](#)

KNOWLEDGE 3 hours, 19 minutes ago
[Bourns UPS for Indoor Use Offer Compact High Reliability Back-up Solutions](#)

REPLY 13 hours, 13 minutes ago
[Re: Hide unrooted tracking](#)

REPLY 1 day, 11 hours ago
[Re: Redefine component schema](#)

REPLY 1 day, 20 hours ago
[Re: How to find shorts](#)

COMMENTS 2 days, 18 hours ago
[Delivering Efficiency with Pulse Width Modulation](#)

COMMENTS 2 days, 21 hours ago
[Re: Scrollwheel zoom/lat](#)

REPLY 3 days ago
[Re: Scrollwheel zoom/lat](#)

REPLY 3 days, 1 hour ago
[Re: Alinvalres / Rats nest](#)

COMMENTS 3 days, 11 hours ago
[ECAD Part Wizard](#)

FORUM 3 days, 22 hours ago
[Strain gauge signal amplifier help](#)

REPLY 4 days, 1 hour ago
[Re: Transferring 2-plane design to 4-plane pcb](#)

REPLY 4 days, 16 hours ago
[Re: Steps to create grooves along a curved shell](#)

REPLY 4 days, 16 hours ago
[Re: Install a purchased Pool DSM add-on module: Not possible](#)

DESIGN CENTRES *Popular themes and technologies*

- RASPBERRY PI: Welcome to DesignSpark, RS Components...
- ARDUINO: Arduino is an open-source electronics prototyping...
- OPEN SOURCE: Open source provides free access to hardware, source code...
- MBED: Mbed Microcontrollers are a series of ARM...

CONTENT EXPLORER

Select the type of content you are looking for. Then select a category to filter with.

Content Type

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Application +

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Technology +

AUTOMATION ELECTRONICS RS UNIVERSITY HOME

Software Community and Support

CONTRIBUTE

DesignSpark Automation



DESIGNSPARK ELECTRICAL

Introducing DesignSpark Electrical. The new, free electrical CAD software built to help you save time and reduce errors.

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Top 5 reasons to use DesignSpark Elec...
This great video tutorial highlights why you sh...

DSE Tutorial: Download, Installation ...
How to download, install and activate DesignSpa...

DSE Tutorial: User Interface
Introduction to DesignSpark Electrical User Inte...

DesignSpark Electrical FAQs
Have a question about this great new software? ...

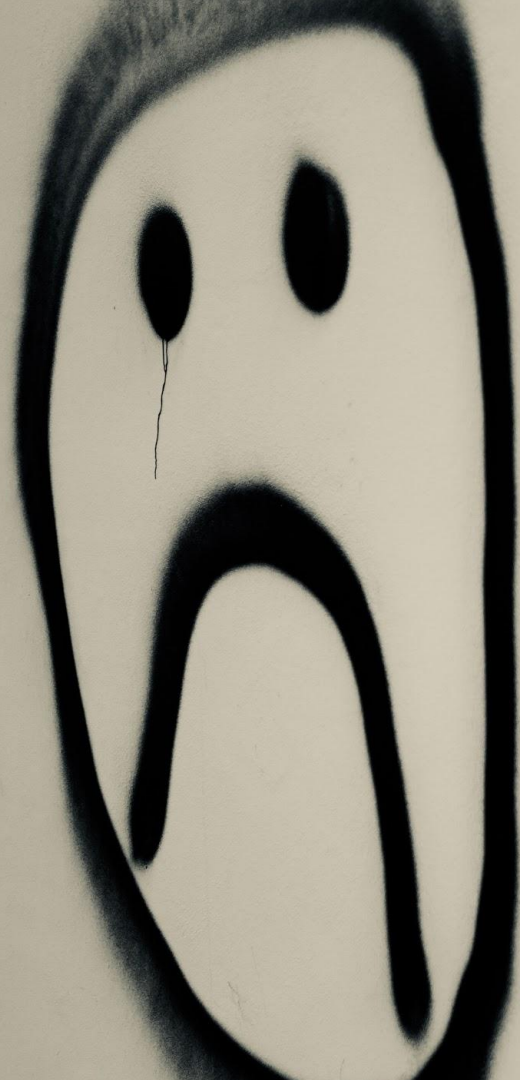
Engineering Suite

My Account

DesignSpark Electrical

Login

Then we saw the code

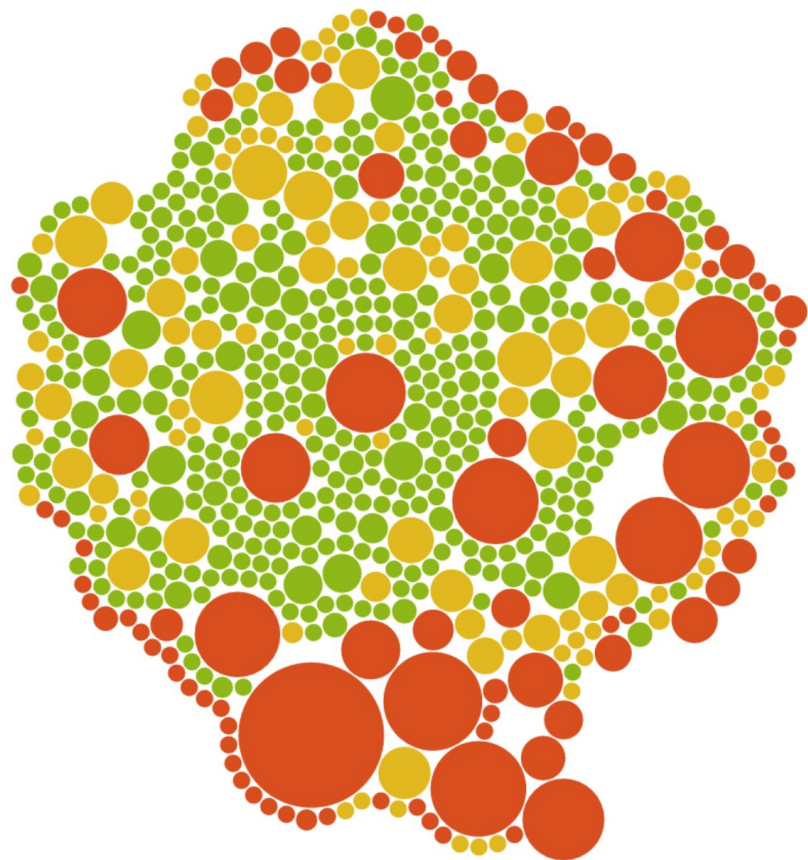
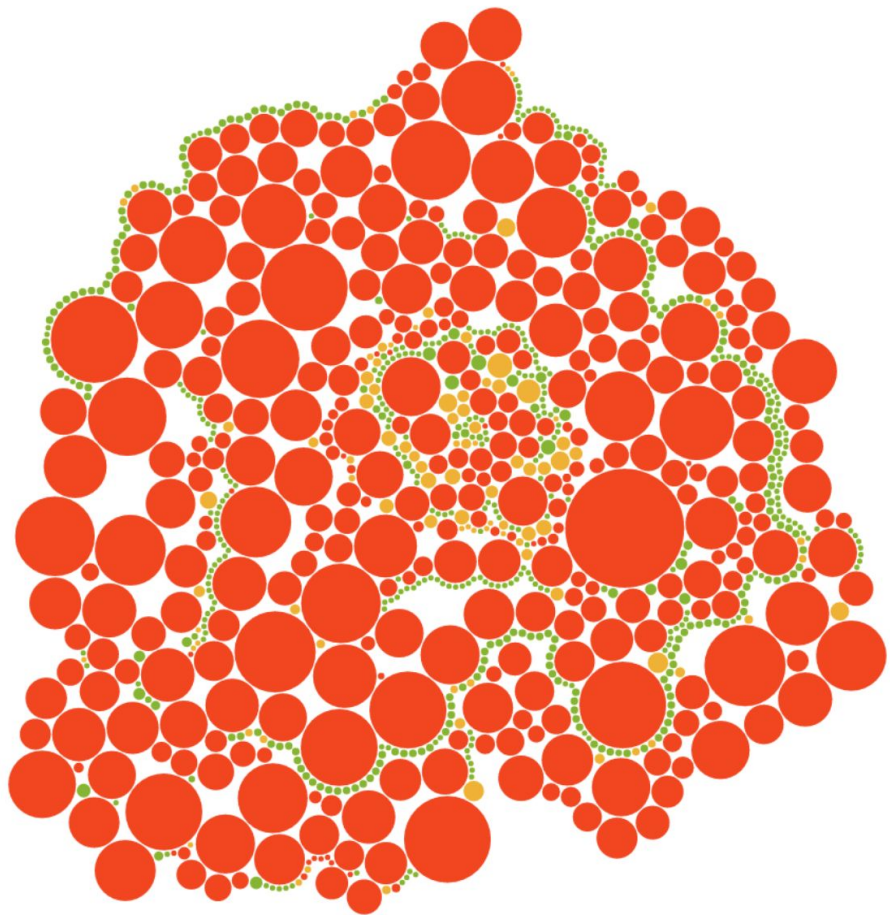


**"It's not worth it mate, just tell them we'd
need to start again"**

"Rather you than me"

"Run a mile"

"I wouldn't touch that with a barge pole mate"



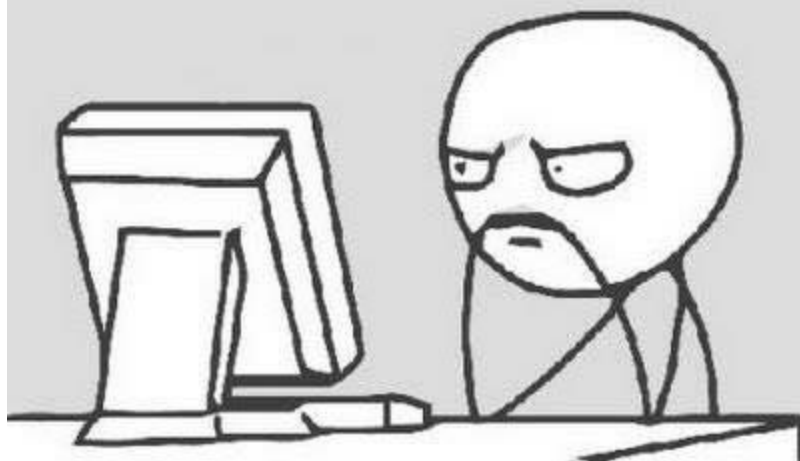
- Hodge-podge of various frameworks and libraries
- Major security concerns
- No tests
- No docs
- No standards

30+ years of technical debt

- Lack of coding standards
- Not using 3rd party dependencies in the appropriate way
- Lack of tests
- No docs
- Lots of debug code everywhere
- Custom framework

6+ months of technical debt

NOPE



FA Cup · 30/01/16



Liverpool

0

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West Ham

Full-time

4th Round



4th Round





Photo © [Graham Robson](#) (cc-by-sa/2.0)

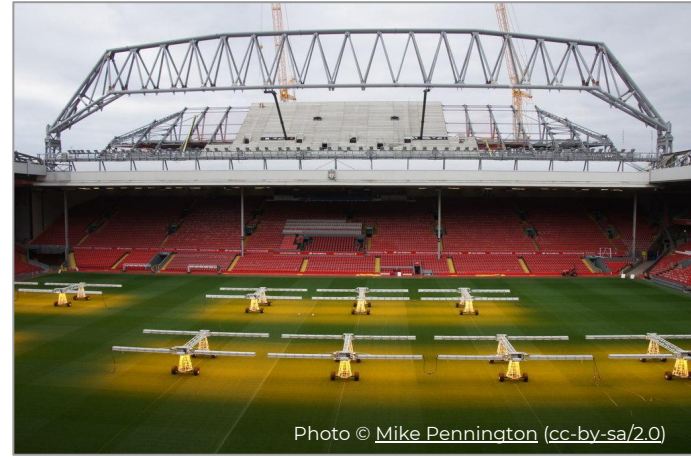


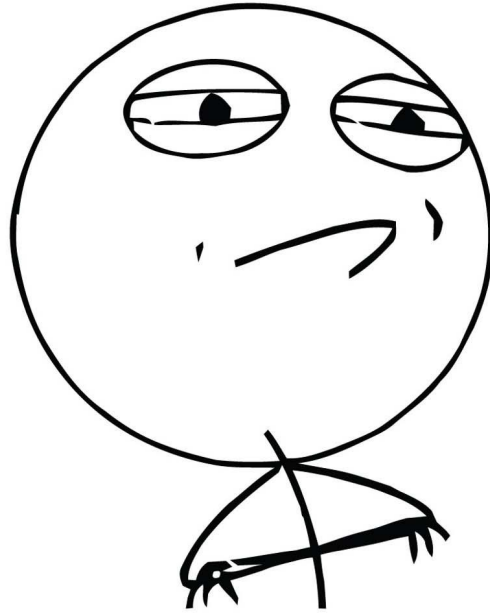
Photo © [Mike Pennington](#) (cc-by-sa/2.0)



Photo © [C Laird](#) (cc-by-sa/2.0)

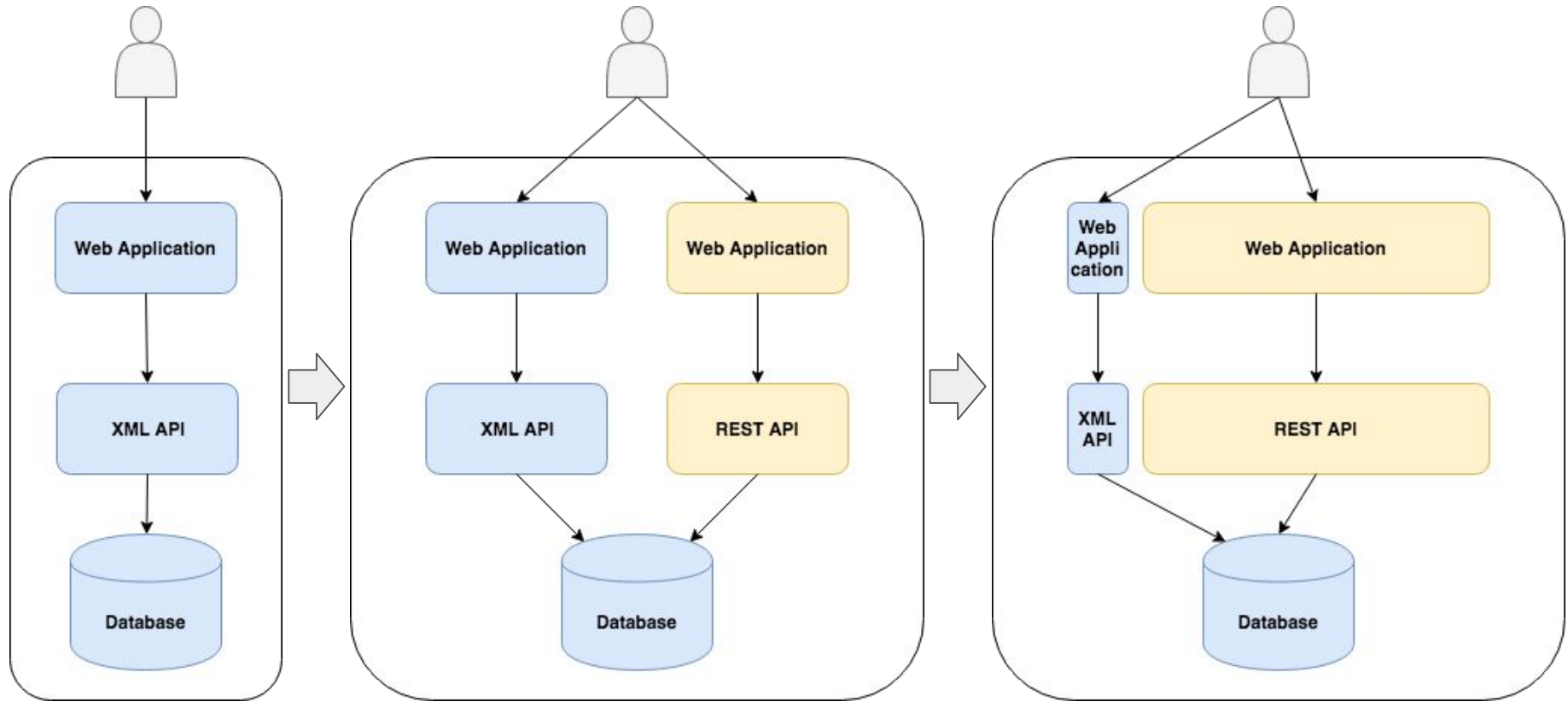


Photo © [Quaragh Cillies](#) (cc-by-sa/2.0)



CHALLENGE ACCEPTED

Strangler Pattern



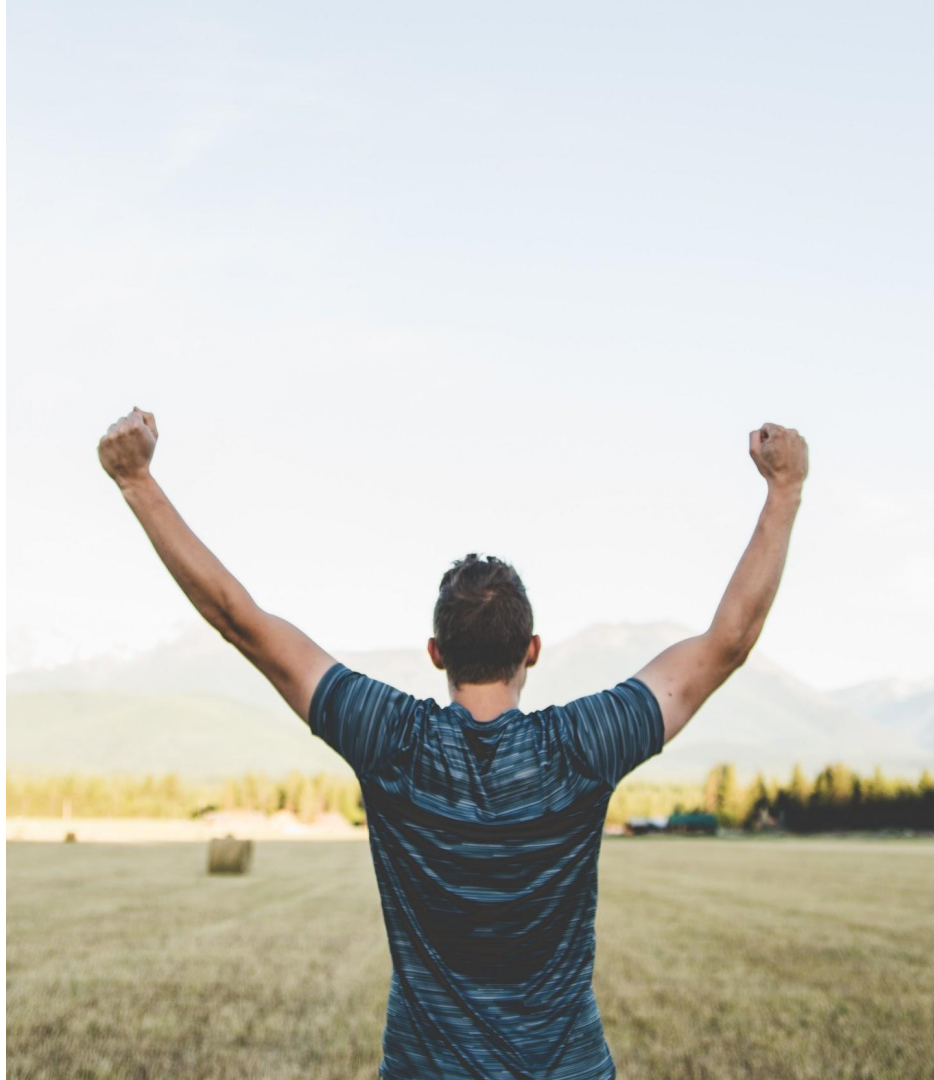
“Working Effectively With Legacy Code”

- *Michael C. Feathers*

What did this give us?

Pros

- Retained existing **following and SEO**
- Enabled us to write **modern, robust, secure code** without tearing down what they already have
- Supported an even split between working on **new features** whilst also **reducing technical debt**
- Maintained **developer morale** by not having to work on existing codebase



Any cons?

- Performance can be affected
- Do sometimes need to peek inside the black box
- Need to remain focussed on getting rid of the old application



What were the results?

Impressive!



Created **value quickly**, by delivering new features from the beginning.



Supported bottom-up **innovation**.



DesignSpark went from community side project to a **monetised framework** with **ambitious goals**.



Developers got excited about working on the project.

The same developers who told me to run a mile, were now asking to be put on the project.

DESIGNSPARK
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Advantages of ABP sensors

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Ask A Question
Our community is growing rapidly, with thousands of engineers, hobbyists and makers of all disciplines signing up every day. Perhaps one of them may have the answers to your questions?

ASK A QUESTION

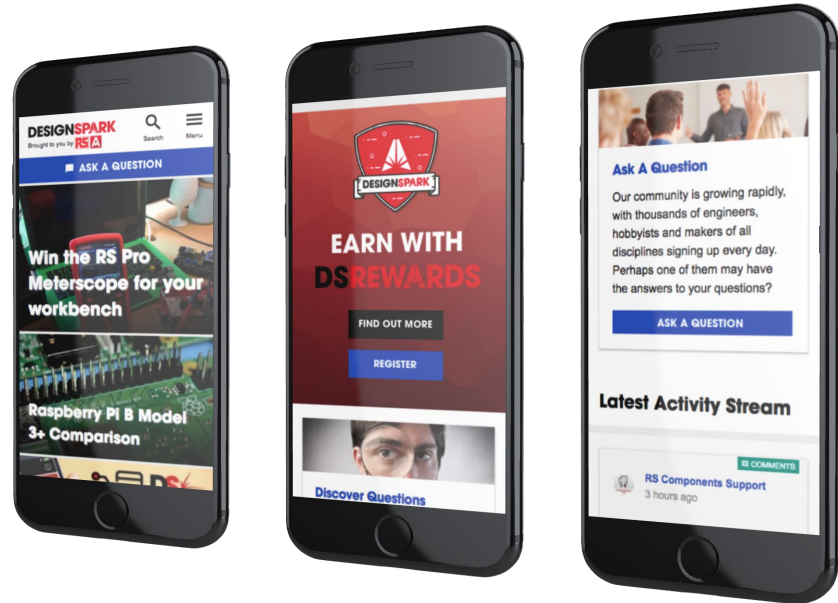
Latest Activity Stream

stozek700 44 minutes ago
Good idea... the printer is too big, maybe this one will do the job <https://www.adafruit.com/product/597>
In Building a Pi Powered Wireless Label Printer

DesignSpark 1 hour ago
Hi D2tech,
A support agent had reached out to you last Friday (May 18) and this issue has been reported as resolved.
Kind regards,
DesignSpark

Shackhacker Internet of Things - May 21, 2018 12:28
Showcasing Various IoT Applications & Use-Cases in the Farming Industry
Though there really isn't a number in terms of monetary value that we can place upon the potential automation of the entire global agricultural industry, the numbers in other areas have proven that the potential is going to be massive.

Dave Ives Projects - May 21, 2018 11:58
Building a Portable DJ System into Traditional Red Metal Toolbox, Part 2: I've Got the Power!
Building a neat 12v power distribution system.



Premier League · 10/09/16

Full-time



Liverpool

4

-

1



Leicester City

Roberto Firmino 13', 89'

Sadio Mané 31'

Adam Lallana 56'



Jamie Vardy 38'



Leicester City



Jamie Vardy 38'

Key takeaways

- Structure new applications with this approach in mind
- Easier sell to development teams
- Develops a better client relationship
- Allows a seamless transition for users

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making software brilliantly simple