Responsive Design and Ad Creative: An IAB Perspective

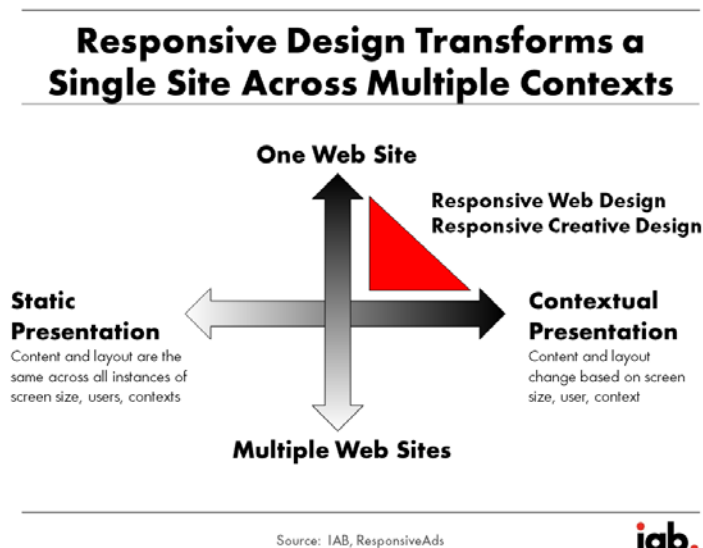## A Report Prepared by the IAB Mobile Marketing Center of Excellence

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Introduction

Buzzwords come and go quickly in the mobile arena, but occasionally one comes around that portends an important change in the industry landscape. One term that pops up frequently these days is "responsive design."

Any advertising jargon with "response" or "responsive" in it risks creating confusion. "Direct response" advertising—advertising with a goal of soliciting an immediate, near-term action from the viewer—has been an industry term for ages, and is very different from responsive design.

In very broad terms, responsive design today refers to a web design process enabling content (including advertising) to resize, reformat, reorganize, and/or reposition itself in real-time so that it looks good and prioritizes itself to suit the likely needs of a user, based on the screen that user happens to be looking at.

Responsive Design Transforms a Single Site Across Multiple Contexts

One Web Site

Responsive Web Design
Responsive Creative Design

Static Presentation
Content and layout are the same across all instances of screen size, users, contexts

Contextual Presentation
Content and layout change based on screen size, user, context

Multiple Web Sites

Source: IAB, ResponsiveAds

It is important to distinguish between two specific applications of responsive design:

- responsive web design (RWD), for web content, and
- responsive creative design (RCD), for advertising creative.

This paper does not mean to recommend (or dissuade) companies from pursuing RWD or RCD solutions. Instead, we have written this introductory perspective paper to offer the IAB's point of view on what responsive design means to the advertising industry, to help establish some common definitions, and to outline some basic principles that firms considering RCD (and RWD) need to keep in mind.

Why Responsive Design?

One fundamental question that must start any consideration of the meaning or value of responsive design is simply, "why?" What are the potential business benefits that make people excited about responsive design, what are the problems it means to solve, why should I care about it?

There are several strong answers to that question, but the most important relates to the consumer experience with digital content.

As mobile/portable devices with small, medium, large, and super-giant screens all gain increasing traction in the market, it's incumbent on content producers to deliver experiences optimized for whatever device the consumer happens to be holding. Many digital designers realize that if you're going to serve an asset on a tablet you need to make sure it works on a tablet, and is attuned to tablet-style user behavior—but some still recycle web or smartphone creative for tablets, squandering the opportunity to leverage the richer tablet environment. Web content and ad creative must be designed with the needs of mobile users in mind.[1]

Delivering the optimal content or creative is quite challenging with a one-size-fits all approach that stretches or squeezes a single version of a site (typically the desktop site) to the screen at hand, forcing the consumer to do the work to improve their viewing experience. In many cases, ad units themselves are shrunk proportionally to fit the screen, resulting in an ugly visual.

Screen Diversity Means One (Ad) Size Does Not Fit All

BlackBerry Curve 9370
360x480

Motorola Droid RAZR
960x540

Apple iPhone 4S
960x640

Amazon Kindle Fire
1024x600

Apple iPhone 5
1136x640

Samsung Galaxy Note
1280x800

Apple iPad (new)
2048x1536

Note: Devices chosen as examples to highlight range of screen sizes (measured in pixels) in US market currently. Images not to scale. Sources: manufacturer websites

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[1] For more on the importance of mobile-optimizing web content, see the IAB's Tap Into Mobile pages, at www.iab.net/tapintomobile.

At the same time, hand-tailoring a content or ad experience for each potential device and screen size on the market is a non-starter; there are simply too many, and they change constantly as new devices are introduced and old ones are retired.

And so we have responsive web and creative design as a technological solution, which automates the process of content optimization, and (if it works) gives the consumer an experience that looks great on their device.

Defining Responsive Creative Design

For the purposes of this paper, the IAB is focusing mainly on responsive creative design. The IAB defines responsive design as it relates to advertising creative as follows:

> **Responsive Creative Design refers to an automated ad server process of optimizing the look and fit of an ad creative to the ad opportunity/ screen/ inventory available.**

RCD can also mean not just 'responsive to the screen' but also 'responsive to the capabilities of the device,' so an ad built using RCD might be shake-able on a smartphone, but mouse-over-able on a PC).
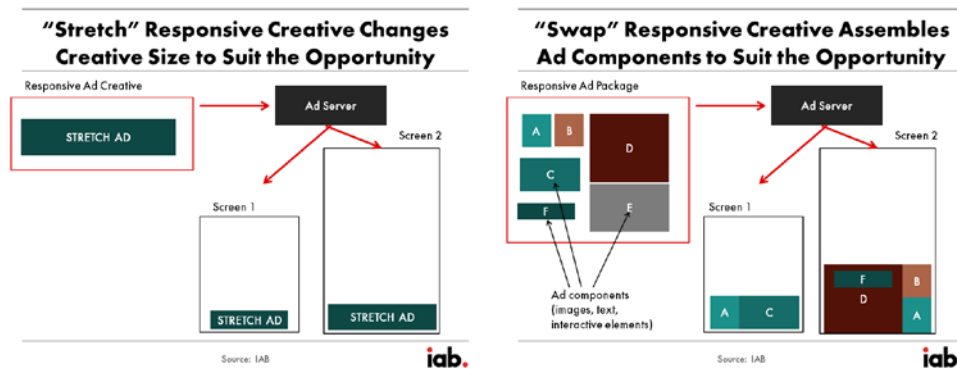
In practice, there are two main ways that responsive creative is being built today.

- **Stretch.** A responsive creative can use different forms of HTML5 or similar technology to dynamically adjust the size of a creative asset to fit the space available.
- **Swap.** A responsive creative can be assembled with the server dynamically selecting creative assets from a package of components to suit the ad opportunity.

Both stretch and swap have pros and cons, and of course they are not mutually exclusive. For example, such a solution might use stretch for small changes in screen size, and swap for new layouts at major breakpoints between say PC and tablet, or tablet and smartphone screen/creative sizes. Covering stretch and swap in detail is beyond the scope of this introductory paper, but are topics to explore with technology vendors delivering RCD solutions. With RCD, creative or content assets are inputs, and the RCD system generates an as an output creative, assembled on the fly, that delivers a user experience optimized for the platform, device, or technology of the user.

Leveraging a responsive creative solution requires a change in the way ad designers work: rather than building complete creative assets, designers need to think more in terms of modular components, and how those components will combine into ad units that reflect the overall message and goals of the campaign.

Example

It is hard to do justice to RCD in still images in a written document—they are best seen live on a PC or mobile device screen. Still, screenshots showing how an RCD ad works in practice help convey the basic idea.

Examples of RCD Ad Units In A Page

Desktop — Netbook/Tablet — Tablet/Smartphone (Landscape) — Smartphone

	Desktop/Netbook	Tablet/Landscape Smartphone	Smartphone
Ad Unit 1	Leaderboard (768x90)	Stretch with break at 468x60	Stretch with break at 320x50
Ad Unit 2	Wide Skyscraper (168x600)	Swap at 468x60	Swap at 320x50
Ad Unit 3	Medium Rectangle (300x250)	Adhesive screen-width banner unit	Adhesive screen-width banner unit

Source: ResponsiveAds, IAB, IDG

Recommendations for Thinking About Responsive Creative Design

Ad designers considering responsive creative design solutions should think about the following:

RCD is not a synonym for "dynamic creative." Some in the industry suggest pushing the definition of RCD to include 'responsive to the context of the ad' or even 'responsive to the preferences of the user.' Imagine an ad creative from say Purina that can reconfigure itself to look good not just on a smartphone as well as a tablet as well as a PC screen, but also can incorporate a photo of a puppy for a dog lover or a kitten for a cat person. This capability is referred to as "dynamic creative" on the PC-based web, and that term applies in mobile as well.[2]

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[2] See: "Dynamic Creative Optimization – Where Online Data Meets Advertising Creative," AdOps Insider, January 18, 2011, http://www.adopsinsider.com/ad-ops-basics/dynamic-creative-optimization-where-online-data-meets-advertising-creative/

The technical capabilities of serving a dynamic ad and a responsive ad are similar, and it is interesting to speculate that at some point the two concepts will merge. However, for the short term, we recommend the narrow definition of responsive design as relating to just the technical question of optimizing creative presentation for a given screen/device.

RCD is not packaging different complete ad creatives in a single tag. Responsive design does not refer to packaging say 2-4 different complete ad creatives in a single tag, and delivering whichever creative is most appropriate to the screen size of the device in question. That is a simple and reasonable approach to the multifarious screen sizes in the mobile world. Similar to RCD, though, this approach impacts media company business models: packaging different creatives in a single tag makes it harder to create an insertion order (IO) for the campaign and disrupts existing size-based pricing models.

Make sure to QA test ads built using RCD. It may be tempting for an ad designer leveraging a responsive solution to simply build a base creative, add whatever extra assets might be needed, and call it a day. RCD makes quality assurance testing *more* imperative than custom-building ad creative does. Pay particular attention during QA to how ads behave around break points, the screen sizes where there is a significant change in ad appearance or behavior. Specific break point sizes will change as displays change over time, but there will always be a finite number of them, and they are key places to expose design or layout flaws.

RCD is not moving ad assembly to the client side. RCD is a server-side phenomenon. Given the information it receives about the device making the ad request, the ad server is best positioned to assemble the appropriate assets and deliver them. The alternative scenario, with intelligence on the client side, requires all the ad assets be pushed down to the device (inefficient and time consuming over wireless networks), or else some way for the server to deliver a catalog of available assets to the requesting client.

Seek other ways to be responsive to mobile users' needs. RCD is "responsive" to the size of the screen, helping optimize a mobile consumer's experience with the creative. Tailoring an ad to respond to a mobile user's other needs will also improve performance, user experience, and interaction rates. For example, ad designers should be aware of the multiple keyboard/keypad layouts on iOS and Android devices. If the ad asks for a user's phone number, the ad should pull up the numeric keypad, not the generic keyboard.

Think hard about the post-tap experience, not just the ad creative. While responsive creative design simplifies the process of optimizing creative to multiple devices, it leaves open the question of where a consumer who interacts with that creative ends up. Delivering a smartphone or tablet user to a PC-web optimized landing page or corporate site is suboptimal at best, and an irritating and negative experience at worst. In short, a responsive ad demands a responsive landing page. Responsive web design thus has an vital role to play in enabling mobile advertising to truly realize its potential.

Reconsider the creative approval process. In the traditional ad world, the creative approval process has been straightforward. However, in the more fluid world of RCD, what it means to approve a creative will likely be quite different. When a "swap" style RCD ad consists of many discrete assets that are assembled to suit a specific space or screen, a manager may need to sign off on a campaign without necessarily having seen every possible permutation or combination of those individual assets.

Is Responsive Creative Design Right For You?

Responsive design technologies are likely to gain importance as the mobile audience continues to fragment across an ever broader array of smartphone and tablet screen sizes. From an ROI perspective, the claims being made for responsive ad (and content) solutions include the following:

- Easier to monetize content
- Faster, cheaper to deliver the right content to different screens
- Faster, cheaper to build ad creative
- Easier to be future-proof

The jury is still out on many of these claims. Relative to custom-building optimized content versions for every variation on iOS and Android and Windows and BlackBerry phones and tablets, it almost certainly is faster and cheaper to deploy a responsive design solution. But very few companies are taking a "design all creative custom, from scratch" approach today. By contrast, responsive design will almost certainly be more expensive than a design philosophy that says "I'm just building a single mobile-optimized version of my content and will run that on all devices." However, such a philosophy doesn't work: it risks a negative effect on the brand as users have a bad experience with poorly designed content or advertising. Since most content creators are opting for an approach that lies somewhere between those two extremes, whether responsive design represents a truly "faster-cheaper" solution will vary.

Whether RWD/RCD Saves Money Depends on Your Status Quo

Source: IAB
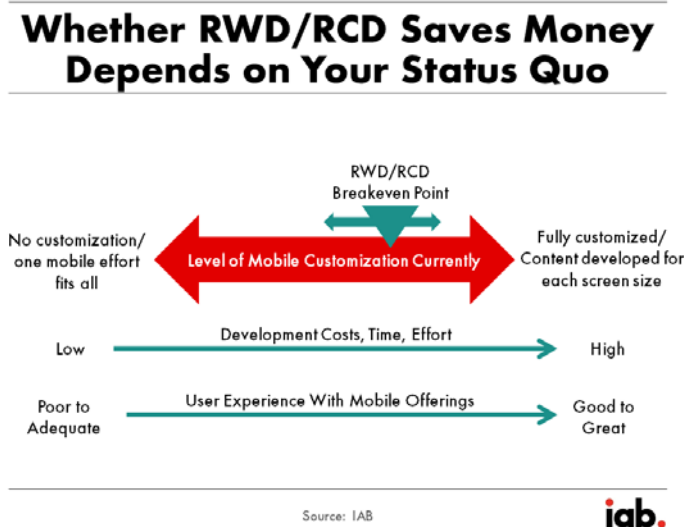
The "future-proof" claim is safer and easier to back up—deploying a responsive design solution today should enable content and/or creative to meet the demands of whatever the next new screens are going to be. RWD and RCD are like a front-end investment in that once you break down silos and build out a fluid, adaptable site or ad framework there will likely be lower operational costs as all content runs from the same servers and cross-references all the different services and tools used. An investment in RCD today may therefore be justified by its implications for ad creation over the long term.

Industry Challenges

Transitioning from a world of pre-built content and ad creative to a world of responsive design will not be seamless. In particular, the industry needs to be aware of and focus on addressing the following challenges:

- **Ad operations**
  - **Planning:** Time must be set aside to plan and understand what different types of ad placements/sizes will be served on each screen size when working with publishers that have responsive websites and ad solutions.
  - **Tags:** Moving to responsive creative design results in a significant change to how ad tags get produced and trafficked. Traditionally, the process of producing ad tags has been well defined and the separate roles of the publishers/demand side and agencies/supply side were well understood. RCD will require new processes for this.
  - **Tracking:** Understanding how to track which ad placement/sizes are seen by users per screen size is critical. There could be large discrepancies between advertiser and publisher counts based on the way the publisher responsive site and ad serving works. For instance if a publisher simply uses a *display:none* technique within their RWD framework (this removes ads that do not fit that screen size from a user's view), it misses an opportunity for the other ad sizes to be served and counted even if the ad did not perfectly fit the screen size. Be sure to address these issues and possible solutions proactively during the planning phase and not after discrepancies or shortfalls occur.
- **User Experience**
  - **Stretch method:** When using stretch RCD you can use standard IAB or MMA sizes (i.e 728x90, 300x250, 300x50) and leverage limited assets like text and images where the unit simply resizes across screens. This can offer an entry-level step before tackling more sophisticated rich media or "rising star" ad units.
  - **Swap method:** When using swap RCD you can give users a more tailored ad experience based on their screen size. For example, a video ad experience for tablet users and a text/image based ad experience for smartphone users.
  - **New ad units:** Allowing publishers to create ad units that align with how users are consuming the content on each screen size on their responsive site can create the best user experience as well as optimizing ad opportunities. Indeed, the very concept of a "standard ad unit" may change as RWD enables a wide spectrum of inventory sizes and shapes and RCD enables ads to fill them.
- **Standards**
  - **Still early:** Responsive web design is still in its infancy and not standardized, therefore the effort put into building responsive creative with one publisher may not work with other publishers with a responsive web site.
  - **Mobile first:** Currently most RWD sites are designed "mobile first" which means ad development should follow this philosophy too. This does not mean that you simply build the smallest ad unit possible and then stretch it to larger sizes. Rather, mobile user needs and behaviors differ from PC users, and you need to think about your mobile audience early in the process and design creative suited to their needs.
- **Business models**
  - **Integrated sales:** With some exceptions, up until now in the digital advertising industry each format (desktop, tablet, and mobile) has typically been priced and sold separately. Moving to an RCD type offering enables (and in some cases may require) publishers to sell a bundle of inventory across devices.

- ○ **Non-integrated buyers:** While there is a great deal of support in theory for selling based on audience rather than device, most agencies are not yet set up to do this. Moving from a world with separate phone/tablet and PC media planning teams will take time.

- **Reporting**
  - ○ **Inventory and pricing:** Determine the potential inventory and pricing by screen during the planning stages, and understand what actual metrics will be available, both in-flight and post campaign. This should help set reporting expectations before the campaign begins.
  - ○ **Metrics by screen size:** Work with the publisher or ad server, or your RCD vendor, to have your metrics broken out by the three main screen sizes (smartphone, tablet, PC).

Implications for Publishers

Advertisers and publishers will have to work together to take advantage of the efficiencies promised by RWD and RCD. On the publisher side the transition from having separate, optimized sites for desktop, phone, and tablet to RWD requires substantial changes in thinking. If you are heading up ad sales for your website and your CTO tells you that she is re-launching your site using RWD, here are some questions to ask her:

1) **Ad servers:** Will we be using one ad server to serve across all screens and does that mean we will have to give up our mobile ad server? If so, what capabilities if any is my sales team losing? Will all the various ad sizes we sell be served via a single ad tag—and will that be RCD-based or require combining different finished creatives in a single tag? How will that change our reporting capabilities?

2) **Ad positioning:** Should I assume that we are shifting our ads around on the page as the page adjusts for screen size? If that's the case, should I be looking for the same ad unit/size on all screens, but assume that the ad unit is moving its location as users go up and down in screen size? Are there issues with ads moving from above the fold to below the fold?

3) **Mobile versus standard landing pages:** Will we have to tell our advertisers that we cannot send our audiences to different landing pages depending on the device they are on? Put another way, will advertisers need to use RWD to create landing pages for campaigns run on our site?

4) **RWD and the mobile experience:** What implications does a move to RWD have in terms of other mobile innovations? Does it allow for location based targeting, device-specific rich media, and other ways to tailor the mobile experience?

5) **RWD and video:** How does the RWD solution address differently optimized video experiences?

Conclusion

Together, RCD and RWD promise to revolutionize digital advertising across PCs, tablets, smartphones, and future smart devices. With the continuing proliferation of different screen sizes and resolutions, any approach that insists on a custom piece of creative for each device is unlikely to prove scalable or cost effective in the long run.

However, the move to responsive creative is going to cause disruptions in the established order of things, for both buyers and sellers alike. As a seller, it's important to realize that RWD isn't just a presentation-layer decision: it has distinct ad sales implications. And as a buyer, it's important to realize that RCD will change business processes as well as creative design. Having these insights at the outset will help all companies maximize the benefits of deploying RCD and RWD solutions.

Reference and Further Reading

http://www.thismanslife.co.uk/projects/lab/responsiveillustration/ A cool illustration of RWD—change your browser window size and the device in the window transforms

http://designmodo.com/responsive-design-examples/ Some nice examples of RWD

http://www.ravelrumba.com/blog/responsive-ad-demos/ Good examples of RCD

http://managewp.com/5-reasons-why-responsive-design-is-not-worth-it A skeptic's perspective

http://johnpolacek.github.com/scrolldeck.js/decks/responsive/ Beautiful, simple, well designed primer on RWD

http://www.netmagazine.com/features/state-responsive-advertising-publishers-perspective Deep dive into the rationale and business drivers for RCD

http://castirony.com/post/26466421254/the-case-for-a-7-8-ipad A designer's perspective on the implications of a hypothetical new tablet screen size

http://www.adopsinsider.com/ad-ops-basics/dynamic-creative-optimization-where-online-data-meets-advertising-creative/ Discussion of dynamic creative

http://www.markboulton.co.uk/journal/comments/responsive-advertising Deeper dive into the ramifications of RWD from an ad sales/ad business model perspective

Contributors

This paper was prepared by the IAB Responsive Design Working Group, comprised of representatives from the following companies:

AdGent Digital Inc	Spongecell
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IDG	The Weather Channel
Martini Media	Univision Interactive Media
Pandora Media, Inc.	Verve Wireless
ResponsiveAds, Inc.	

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