

Northeastern
IPM
Center

SEO basics

Helping your audience find your web content

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SEO defined

SEO = search engine optimization

Optimizing your website/content so **search engines** send you as much relevant, qualified traffic as possible

Why is search important?

- * Web users are not a captive audience; can/will use whatever site best suits their purposes
- * The web is huge and anybody can publish
- * Many visitors arrive via search, not directly
- * Poor signal-to-noise ratio; how do you stand out?

Intro and purpose

Northeastern IPM Center maintains Stop BMSB website, but:

- * Helpful to pull back the curtain on SEO considerations
- * SEO can be valuable to any of you who have your own pages/sites elsewhere
- * Includes potential mutual benefit with the Stop BMSB site (more on that later...)

Frequently used terms

- * **SEO** = search engine optimization
- * **query**: a search term inputted into a search engine
- * **keyword**: a word or phrase associated with a website's subject matter; queries might contain one or more keywords, and search engines try to find matches on websites
- * **hit**: a single search result
- * **SERP**: search engine results page, or one page of search results that a search engine generates in response to a query
- * **algorithm**: a method for computationally processing inputs to systematically generate outputs; a search engine's algorithm determines how it processes the content it finds on the web into SERPs
- * **URL**: uniform resource locator, or web address
- * **UX**: user experience; characteristics of websites that factor into how (and how well) a person interacts with them

Two kinds of search

- * **organic:** based on how your website ranks according to a search engine's algorithm
- * **paid:** website owner paid the search engine to be featured as an ad based on specified keywords

In search results, paid results are visually differentiated from organic. It's how search engines make money.

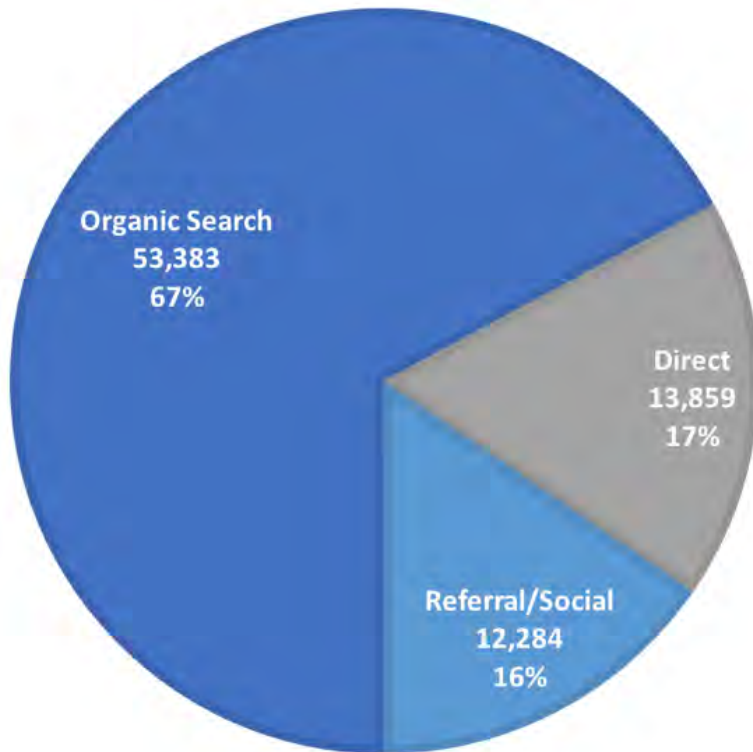
Paid search: nice if you have budget, but doesn't boost organic search results.

*You want to optimize for organic because it's **free**.*

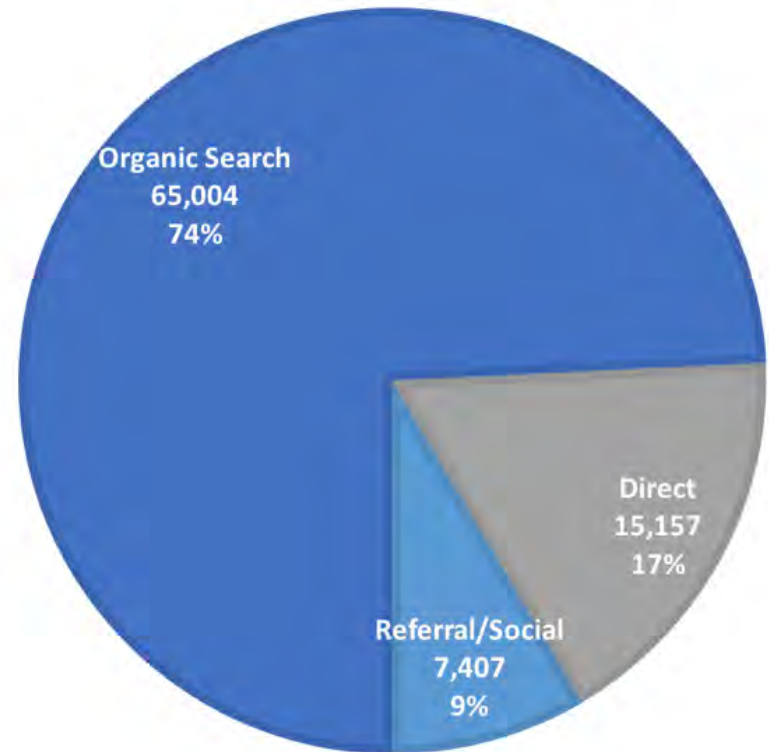
... and because it encourages you to maintain a good website.

StopBMSB.org Traffic Sources

TRAFFIC SOURCES (2017)



TRAFFIC SOURCES (2019)



Organic search accounts for most of the traffic, and that portion is growing. (Referral traffic has declined somewhat.)

Good vs. evil: an arms race

- * **white hat SEO:** helps both your website and your audience by increasing traffic from users who can genuinely benefit from your content
- * **black hat SEO:** games the system, exploiting search algorithms to maximize traffic (and revenue) regardless of relevance or benefit to users

As search algorithms become more sophisticated, black-hat tactics are increasingly recognized and punished in rankings

How SEO impacts your reach

Any query is likely to yield multiple pages of search results.
But...

Higher-ranked hits are more visible

Visibility equals traffic

SEO aims not only to improve your rank, but also to ensure your content is deserving of that rank

What SEO is *NOT*

An arcane, inscrutable set of spells and incantations that only tech geniuses can comprehend

What SEO *IS*

- * Making your website authentically true to its purpose and good at executing on it
- * Having content your audience wants and getting it in front of them

Why SEO is actually quite simple

SEO intersects and aligns with:

- * Good content strategy
- * Making good websites people want to use

As search engines evolve, they increasingly “think” like the humans they are designed to help

Recommendations and why they are needed

If SEO emerges naturally from good site strategy, why have specific SEO tactics?

Once you understand core SEO principles, there are some guidelines to help implement them

Keywords: overview

Remember, “keyword” = word or phrase one might associate with your website’s subject matter

Search queries include keywords users are looking for

Keywords: the old way

HTML includes “meta” tag for specifying information about a page:

- * Part of a page’s source code; not displayed
- * “Machine-readable” (by browsers, search engines)

One meta tag is the “keyword” meta tag:

```
<meta name="keywords" content="apples, oranges,  
bananas">
```

Keywords: the old way (cont'd)

In early days, search engines used keyword meta tag to determine page topic and send relevant traffic

But: easy for black-hat SEOers to abuse by indiscriminately adding long lists of keywords with no relation to site content (“keyword stuffing”)

Also easy for even well-intentioned page owners to neglect or allow to become outdated

Keywords: the new way

Page content should reflect and convey its purpose

Search engines increasingly try to reward that

Recommendation: *think about keywords relevant to your content and weave them naturally into it*

Unlike old way (meta keywords), this means using keywords in your visible page content

Why it's challenging:

- * Put yourself in audience's shoes
- * Think about what they want/need from your site
- * Consider what they know and don't know

Keywords: the new way (cont'd)

BMSB example

This team is used to referring to the pest by the “BMSB” initialism

Nothing wrong with a shared vocabulary, but...

For public-facing materials, it might create challenges

- * Does the audience know what a “BMSB” is?
- * Which keywords are they likely to be searching on?
- * Are they aware BMSB is particular type of stink bug posing uniquely severe agricultural threat?
- * Or do they just recognize it as generic stink bug/consider it non-specific pest?

Search queries used to find StopBMSB.org

Search Query	Clicks	Clicks
	32,968 % of Total: 61.80% (53,346)	32,968 % of Total: 61.80% (53,346)
1. brown marmorated stink bug	9,821	29.79%
2. stink bug	5,410	16.41%
3. bugs that look like stink bugs	1,002	3.04%
4. types of stink bugs	669	2.03%
5. stink bugs	597	1.81%
6. bmsb	499	1.51%
7. stink bug look alike	497	1.51%
8. marmorated stink bug	486	1.47%
9. brown stink bug	480	1.46%
10. samurai wasp	399	1.21%

Keywords: the new way (cont'd)

BMSB example (cont'd)

Since goal of website is to draw maximum number of visitors who can benefit from its information...

The content of your pages should reflect what people will be searching for

Recommendation:

- * Spell out “stink bug” (the full “brown marmorated stink bug” is OK) at least 1x/page
- * Introduce “BMSB” immediately after and feel free to use it for remainder of page
“The brown marmorated stink bug (BMSB) is a major agricultural nuisance. BMSB management options include...”

This encourages search engines to index and rank page for “stink bug” & variations

URLs and slugs

Slug: portion of URL that specifies individual page or level in site hierarchy:

www.stopbmsb.org/about-us/

Why does it matter?

- * Web addresses should be human-readable aliases
- * They convey information about purpose/content of site, level, page, etc.
- * Prudent use of keywords in slugs help search engines understand your content

Constructing a slug

1. Take page title, which should contain relevant keywords
2. Consider omitting words like “and,” “or,” “but” (not critical but helps length)
3. Omit words made redundant by other parts of URL
4. Separate words with dashes
 - * Running words together inhibits readability and searchability
 - * Spaces are discouraged because they need to be encoded as “%20”. This makes URLs difficult to read and may introduce other problems.
 - * Underscores are easily lost in link underlining

Don't keyword-stuff (i.e., indiscriminately add peripherally relevant keywords)

Search engines won't reward this, and it just looks sloppy, “trying too hard,” and fly-by-night to visitors

Slug examples: do's

Good:

- * www.grocery.com/fruits-vegetables/
- * www.grocery.com/fruits-vegetables/apples/
- * www.grocery.com/fruits-vegetables/oranges/

Slug examples: don'ts

Technically permissible, but bad SEO and/or user experience:

- * www.grocery.com/a3498234/
Gibberish to humans and useless to search engines
- * www.grocery.com/fruitsandvegetables/
Hard to read; search engines may not parse correctly
- * www.grocery.com/fruits%20vegetables/
What "fruits vegetables," with a space, would have to be turned into to avoid breaking link
- * www.grocery.com/fruits_vegetables/
Underscore would blend into link underlining
- * www.grocery.com/fruits-organic-locally-grown-sustainable-cooperative-marketplace-nutritious-deals-vegetables/
Egregious keyword stuffing
- * www.grocery.com/fruits-vegetables/apple-fruits/
Second "fruits" adds no additional meaning. We already know "Apples" is subordinate to "Fruits and Vegetables." Exception: if "fruit" is part of a particular fruit's name, like "passion fruit."

Stop BMSB slug examples

- * ***About Us***

www.stopbmsb.org/about-us/

- * ***Project Team***

www.stopbmsb.org/about-us/project-team/

- * ***Stink Bug Basics***

www.stopbmsb.org/stink-bug-basics/

- * ***State-by-State***

www.stopbmsb.org/where-is-bmsb/state-by-state/

Links and link equity

Hypertext links make the web what it is

Good use of links helps visitors find related information

Search engines reward this

SEO value of a link is called “link equity”

Types of links & their impact

- * **Internal links** are between pages on your site
 - * Provide easy access to other relevant parts of your site
 - * When done well, helps visitors
- * **External links** bring visitors from other sites to yours
 - * Weighted more heavily by search engines
 - * Somebody else is vouching for your content
 - * *The more “trusted” a website is—if it’s a well-executed website representing an influential, respected organization—the more equity it confers when it links to you*

Link recommendations for BMSB team

BMSB project offers opportunity for mutual link equity

- * If you have a faculty page and/or lab site and it lists projects you're involved with, it makes sense to link to the Stop BMSB site
- * More link equity if you're on a major .edu domain
- * Stop BMSB site links back to you (already done where known)
- * Authoritative cross-links help visitors and build legitimacy in eyes of search engines

Other topics to consider

- * Duplicate content
- * Page load time
- * Mobile-friendliness
- * Accessibility
- * Security

Common threads

Question: What does SEO have in common with other aspects of website management?

(user experience, accessibility, content strategy, etc.)

Answer: *Your audience!*

Common threads (cont'd)

What undergirds all these subdisciplines:

1. Determine who your audience is
2. Create and manage your site with them in mind

Good websites implement best practices...

...and search engines reward them

Sources & further reading

- * <http://moz.com/beginners-guide-to-seo>
- * <http://moz.com/beginners-guide-to-seo/technical-seo>
- * <http://moz.com/learn/seo/what-is-link-equity>
- * <http://www.dreamhost.com/blog/seo-tools-to-optimize-website-success/>
- * http://en.wikipedia.org/wiki/Canonical_link_element
- * <http://en.wikipedia.org/wiki/Hypertext>
- * http://en.wikipedia.org/wiki/Keyword_stuffing
- * <http://yoast.com/meta-keywords/>

Questions?

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