

**Title:** Adding UF.EDU and other derivative domains

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**Client:** University Relations and Office of the CIO (UREL, CIO)

**Audience:** The University of Florida community and general public

**URLs:** ufl.edu and uf.edu

**Approvals:**

Web Administration: (name, date)

UREL : (name, date)

CIO: (name, date)

**Background**

**University of Florida's domain name**

The University of Florida (UF) was an early participant in the Internet and an early adopter of Internet enabled tools such as web pages and email.

The Internet presence of UF is defined by its second level domain name, UFL.EDU. According to people who were involved at the time, when UF originally applied for a domain name in the late 1980's, the issuing authority (currently ICANN) insisted on a minimum of three characters for the second level domain label. UF requested and received ufl.edu as a second level domain. UFL.EDU became an active domain record on March 25, 1986.

Over the intervening decades, UF.EDU became acceptable as a second level domain name and it became an active domain record on July 26, 2006. At this point, UF owns both UFL.EDU and UF.EDU.

Within the Internet community, there are four recognized major first level domains: .edu, .com, .net and .org. The table below shows the owner of record for each permutation of second level domains.

<b>Domain</b>	<b>Registered to</b>		<b>Domain</b>	<b>Registered to</b>
ufl.edu	UF-CNS		uf.edu	UF-CNS
ufl.com	UF-CNS		uf.com	Branded Holding Group
ufl.net	UF-CNS		uf.net	Steven Kennedy
ufl.org	UF-CNS		uf.org	Web Trading Company

As currently configured, UFL.COM redirects to WWW.UFL.EDU. The other domains owned by UF may also be redirected in a similar fashion. UFL.EDU has been the canonical second level domain for UF for over twenty years. The redirect of UFL.COM to WWW.UFL.EDU has been active since about January 12, 1996. The redirect occurs nearly transparently to the end-user via a central Web server configuration.

In a branding review during 2005-2006, UF moved to update its graphical presence away from the school seal and towards using a monogram (see below). In the full signature, the left most “UF” is the monogram.



Figure 1: UF Seal



Figure 2: UF Signature with monogram

As the University of Florida is colloquially known as “UF” and the branding now uses “UF,” a request has been made to allow the domain UF.EDU to be a fully functional part of the University of Florida’s Internet presence.

This branding effort relates to how UF publicizes its electronic identity outside the University. In principle, no requirement exists to change internal technical structures. Current expectation is that it will be necessary to maintain both UFL.EDU and UF.EDU for an indefinite period. PR branding efforts may focus on communicating UF.EDU while internal technical efforts may maintain both UFL.EDU and UF.EDU as fully functional parts of the Internet presence.

### **Input from the Information Technology Community of UF**

As part of the preparation of this project document, the Information Technology (IT) community at UF was encouraged to provide input and review. This review was solicited both through formal channels such as the ITAC-NI committee and through informal channels such as the email list server Campus Computer Coordinators (CCC). [1]

The UF IT community recognizes that the deployment of a new Internet presence in coordination with a new branding initiative could have positive implications for the University. However, since it is possible that future branding campaigns may request subsequent changes to the UF Internet presence, they recommend that all affected parties be involved in such projects so that projects which require pervasive changes in technical behavior be accorded serious and substantial review. In the more general sense, UF should identify a common understanding of whether the UF domain name is primarily a technical fact or a mutable public-relations property.

Overall, input from the IT community does not support a complete change of the domain from UFL.EDU to UF.EDU. The opinion of the UF IT community is that it would be preferable to maintain both domains indefinitely. Specifically, they recommend that a complete return on investment (ROI) study be completed by University Relations, the Office of the CIO, IT community and accounting before this project moves forward. The intention of such an evaluation would be to fully identify and balance the costs in UF

reputation, direct changes, and time-worked with the benefits expected from this project. It is their concern that the costs may overwhelm the benefits.

### **Experience of other higher education institutions**

Other institutions of higher education are likely to have undertaken similar projects. University of Virginia, University of Ohio and University of Illinois are three that may have done so recently. Web Administration will contact these and collect as much relevant information as practical for additional consideration.

### **Overview of the Internet presence of the University of Florida**

- 1) Electronic
  - a. Web pages:
    - i. UF has over 3,000,000 web pages at addresses with ufl.edu
    - ii. Search: UF relies on third party search algorithms such as Google PageRank to make information about UF findable. Changes to domain names can adversely affect PageRank.
    - iii. External links: Many non-UF entities provide web pages with links to UF web pages with the ufl.edu domain name.
    - iv. UFL.EDU is the canonical second level domain for all UF related web pages. Related second level domains such as ufl.com redirect via central configuration to www.ufl.edu. The redirect is transparent to the end user. The 301 redirect also transfers the Google page rank within a couple of weeks.
  - b. Web servers
    - i. CNS maintains central web servers
    - ii. UF has over 500 web servers which provide pages that end with ufl.edu
    - iii. Various units manage non-central web servers.
  - c. Email
    - i. UF has over 100,000 email addresses that end in ufl.edu
    - ii. UF has over 300 mail servers that handle ufl.edu related traffic. More than 100 of these are authorized to send mail off campus.
    - iii. CNS provides some central mail servers.
  - d. Domain Name Servers (DNS)
    - i. UF has a central DNS service managed by CNS
    - ii. Additional DNS servers are managed by other groups on campus
  - e. Applications
    - i. Various applications in use on campus (e. g. ISIS, PeopleSoft) rely on ufl.edu to different degrees. Worst case is that the domain is hard coded into the operations of the application
    - ii. Various access lists are in use on campus to provide limitations to use of services. Most entries in these lists use IP addresses but some include the domain label.

- 2) Non-Electronic
  - a. Stationary:
    - i. Most stationary such as letterhead, print publications and business cards contain Internet presence information such as email and web addresses. These could eventually be updated to be consistent with the UF.EDU domain name. If UFL.EDU remains active and viable, no particular effort to update the printed material would be required.
  - b. Professional identity: Since many staff and faculty have been with UF for a long time, they have only known and communicated their professional identity as related to ufl.edu. Maintaining both domains would allow the option to maintain or change how they communicate.

### **Objectives**

The addition of UF.EDU as a fully functional part of the web presence needs to be:

1. **Transparent:** This addition must be as transparent as possible to the affected people and systems.
2. **Coordinated:** The addition must occur in a reasonably coordinated way to all of the affected people and systems.
3. **Appropriate:** Overall changes must involve effort appropriate to the risks and benefits. Resources allocated to the project must be appropriate to the schedule and goals.

### **Functionality/Use Case Overview**

Audience Uses:

1. Find information about UF
2. Communicate electronically with UF
3. Use electronically provisioned services provided by UF

UF Staff Uses:

1. Maintain electronic systems consistent with additional domain name or maintain, internally, a co-existence of both domain names (e. x. ifas.ufl.edu and ifas.uf.edu)
2. Maintain non-electronic systems consistent with either domain name

**Business processes: To be identified.**

### **Scenarios for Change:**

There are two major scenarios for adding the UF.EDU domain:

- 1) Only alias a designated number of top level websites to the UF.EDU domain. The chosen sites will be those that have an externally facing component and are important for the branding effort. For example: [www.uf.edu](http://www.uf.edu), president.uf.edu, trustees.uf.edu, etc.
- 2) For the full Internet presence, update all websites and mail servers to accept both the UFL. EDU and UF.EDU domain. This would involve all campus web servers and mail servers so that any web address or mail address could use either UFL.EDU or UF.EDU. The expected duration of this scenario is indefinite.

There are levels between scenario 1) and 2) that may be the most cost effective and provide the benefit to branding that is desired. A solution that requires minimal effort for maximum benefit is the desired outcome.

In support of scenario 2, the UF IT community identified the following:

- 1) **Findability** -- Humans in most cases do not record and type URLs, relying instead on search engines. This implies that the use of a new domain need not force legacy presence to change.
- 2) **Completeness** -- At UF, the change from CIS to CISE name change spanned 10 years and in some places is still on-going. A full switch from UFL.EDU to UF.EDU would require at least as long if not longer.
- 3) **Research and Academics** –
  - i. **Grant Agencies**
    1. NIH grants rely on Internet presence information. These may have activity for 5 or 6 years.
    2. All address books are created equal, but some are more equal than others. Address books held by grant agencies are of very serious importance to researchers on campus. Maintaining these communication channels is important.
  - ii. **Brick-and-mortar community**: References to UF's Internet presence exist in paper form in millions of publications: periodicals, books, transcripts, recruitment/acceptance/rejection letters, catalogs, etc. Maintaining the validity of those references, maintains our researchers' ability to gain credit for their work, and our applicants' access.
- 4) **Continuity** --
  - i. **Consistency**: UF has online reputation and presence dating back before the beginning of the Web. This reputation is supported in no small part by consistent addressing.
  - ii. **Alumni**: UF has expressed a promise to many alumni that they can have a permanent address under the domain 'alumni.ufl.edu'. Changing that would incense an important fraction of our development community.
  - iii. **Email**: changing to only the UF.EDU domain would cause mail proceeding from un-transitioned addresses to appear more spam-like because reverse DNS for it will fail.

In opposition to scenario 2, the UF IT community identified the following:

- 1) **Findability** – Multiple domain names will likely reduce search engine (e.g. Google) page rank and therefore reduce overall findability. Since any page would be reachable by two independent addresses, current page ranks would be sharply curtailed as some audiences learned of the revision, in essence splitting our reputation between the two sources. Deactivating the UFL.EDU namespace would create a population of dead links which will not benefit our SEO (Search Engine Optimization) at all.

Mitigating this issue would require on-going efforts to monitor links and encourage web page administrators internal and external to UF to update the links to a preferred address. Similarly permanent redirects will help mitigate the issue but must be scrupulously maintained.

- 2) **Perception of priorities** -- UF is in the middle of a hiring freeze, and we have seen harbingers of serious budget cuts. In that environment, spending large amounts of time and effort on projects which may appear to be primarily cosmetic modifications should be very carefully supported with an appreciation of the practical benefits which will devolve from the initiative.
- 3) **Complexity** – On-going support of two domains will create complexity in the day-to-day operations and activities of the UF IT community. This will overall increase the workload for general maintenance and reduce the effort available for additional projects.

### **Graphic identity or branding:**

Changes to graphics will need to support the additional domain name as appropriate. The extent and timeline will be discussed with University Relations. The UF branding logo is already converted and in use.

### **Options:**

Phase 1: Redirect uf.edu to www.ufl.edu. Central web server configuration is updated. All other services remain active under ufl.edu. Note that only the specific second level domain pages will redirect (uf.edu/friends will redirect to ufl.edu/friends but ifas.uf.edu not redirect to ifas.ufl.edu) in this phase. As of November 2007, this phase is completed.

Phase 2: Maintain UFL.EDU and UF.EDU as dual valid domains. Coordinate with all campus DNS, e-mail and web administrators to support UF.EDU address for access to all of UF's Internet presence and electronic resources.

#### **1) Electronic**

##### **a. Web pages:**

- i. Phase 1: Configure central DNS servers to redirect uf.edu to ufl.edu. No other web page addresses are affected.
  1. Pros: quick and low risk option. Transparent to user. Minimal changes or coordination needed.
  2. Cons: No other web addresses change (e. g. ifas.uf.edu will not automatically redirect to ifas.ufl.edu). Email and other services remain within the ufl.edu domain.
  3. Effort/Risk: minimal/none
- ii. Phase 2: Configure all web servers to have a shadow server at [www.bbb.uf.edu](http://www.bbb.uf.edu) that does a **301 redirect** to [www.bbb.uf.edu](http://www.bbb.uf.edu). If some departments prefer not to do this, they can coordinate their

DNS entry for [www.bbb.uf.edu](http://www.bbb.uf.edu) to point to a CNS maintained virtual server that redirects to [www.bbb.ufl.edu](http://www.bbb.ufl.edu)

1. This should be implemented as a test environment without publishing it. This will allow us to test whether everything still works correctly.
- iii. Phase 3: Publish the existence of the UF.EDU “face of UF” and implement full support for both UFL.EDU and UF.EDU at all web servers.

**b. Email**

- i. Phase 2: Configure all e-mail servers to accept [username@aaa.bbb.uf.edu](mailto:username@aaa.bbb.uf.edu) and deliver it to [username@aaa.bbb.ufl.edu](mailto:username@aaa.bbb.ufl.edu). No Active Directory structure has to be changed, it just needs to accept the additional address as an alias.
- ii. Phase 3: Publish the existence of the UF.EDU “face of UF” and implement full support for both UFL.EDU and UF.EDU at all mail servers.

**c. Domain Name Servers (DNS)**

- i. Phase 1: In support of (a.i.) configure central DNS servers to redirect uf.edu to ufl.edu.
- ii. Phase 2: Configure all DNS servers on campus to provide the equivalent [aaa.bbb.ufl.edu](http://aaa.bbb.ufl.edu) IP address for any [aaa.bbb.uf.edu](http://aaa.bbb.uf.edu) query. All reverse lookups for [nnn.mmm.227.128.in-addr.arpa](http://nnn.mmm.227.128.in-addr.arpa) still return the [aaa.bbb.ufl.edu](http://aaa.bbb.ufl.edu) name
- iii. Phase 3: Publish the existence of the UF.EDU “face of UF” and implement full support for both UFL.EDU and UF.EDU at all DNS servers. Note: Microsoft Active Directory may need supporting changes which may be difficult [2].

**d. Applications:** No applications will be affected as the UFL.EDU structure remains completely functional. In the long-term, it may be kept invisible from the outside

- i. Identify affected applications, for each identify options
- ii. Identify affected access lists, for each identify options.

**2) Non-Electronic**

**a. Stationary:**

- i. Not part of this effort

**b. Professional identity:**

- i. Not part of this effort

Footnotes:

[1] Original data:

The full input from these conversations can be found in the minutes of the ITAC-NI meeting (<http://icc.ifas.ufl.edu/ITAC/NIminutes/NImin11-8-07.htm>) and the archives of the CCC email list serve for November 2007 (<http://lists.ufl.edu/cgi-bin/wa?A1=ind0711&L=ccc>) . In addition, the discussion from the CCC list has been summarized at <http://nersp.osg.ufl.edu/~asr/media/ccc-ufl-uf.html>.

[2] Active Directory root domain changes:

<http://technet2.microsoft.com/windowsserver/en/library/996741d8-28e4-4d20-9949-8f17fb9d3cfd1033.mspx?mfr=true>