

UNCLASSIFIED

MEMORANDUM REPORT 01-IT-M-039
MORE GUIDANCE AND OVERSIGHT CAN IMPROVE BROADCASTING
BOARD OF GOVERNORS' WEB SITE PRIVACY
May 2001

In response to requirements of Section 646 of the Treasury and General Government Appropriations Act, 2001 (Public Law 106-554), the Office of Inspector General conducted a review of Internet privacy management at the Broadcasting Board of Governors. This report focuses on the Broadcasting Board of Governors' practices regarding the collection of personally identifiable information through the use of "cookies"¹ and other means on its public web sites.

Specific objectives of our review were to (1) identify the Broadcasting Board of Governors' policies and procedures for managing its Internet web sites in accordance with Federal guidance, (2) determine whether the Broadcasting Board of Governors' web sites use or have entered into third-party agreements concerning the use of cookies, and (3) determine whether all of the Broadcasting Board of Governors' major web entry points have privacy statements posted that adequately reflect what, if any, personal information is collected on the web sites and how that information is used. In addition, during the course of our review, we examined the Broadcasting Board of Governors' structure for managing its web sites and ensuring Internet privacy organizationwide.

RESULTS IN BRIEF

The Broadcasting Board of Governors has become increasingly reliant on the World Wide Web to deliver multimedia news and information to international audiences and to inform the public about its activities and services. The Broadcasting Board of Governors maintains four public Internet web sites, but has not developed policies to ensure that the sites are managed in accordance with Federal privacy guidelines prescribed by the Office of Management and Budget (OMB). Specifically, the guidelines restrict the use of persistent cookies on Federal Internet sites without compelling need, agency head approval, and posted notices to advise the public of any information collected on the sites and how that information is used. Cookies are a typical means of collecting personal data on Internet sites, often without the site visitors' awareness.

In the absence of an agency policy to help ensure web privacy, we found two instances in which the Broadcasting Board of Governors used persistent cookies on its web sites without required authorization. Further, one of the four sites that we reviewed had no privacy statement and therefore no means of advising users of any information

¹ A cookie is a small text file placed on a site visitor's computer hard drive by a web server. A cookie allows a server to recognize returning users, track online purchases, or maintain and serve customized web pages. A cookie also facilitates the collection of personal information, such as extensive lists of previously visited sites, e-mail addresses, or other information to identify or build profiles on individual site visitors.

collected on the site. We found no evidence that cookies or any other unauthorized means were used to collect personally identifiable information on the agency's public web sites.

The Broadcasting Board of Governors recognizes that it needs to develop web privacy policies to help ensure compliance with Federal Internet management guidelines. Agency officials informed us that they recently began to develop a policy directive to ensure compliance with Federal guidelines for Internet privacy management within the International Broadcasting Bureau. The International Broadcasting Bureau is responsible for governing web management throughout the Broadcasting Board of Governors.

BACKGROUND

Rapid innovations in technology in recent years offer increasing opportunities for the Federal Government to improve the quality of information and service that it provides to U.S. citizens and world audiences. The World Wide Web, also known as the Internet, has emerged as a powerful tool for communicating large amounts of information on Federal activities, policies, and programs. At the same time, however, the Internet has made it possible for web sites to track and collect personally identifiable data² from site visitors, making online privacy one of the key and most contentious issues in this information management age.

Internet cookies are a principal means by which web sites can collect personal information from site visitors, often without the visitors' knowledge or consent. There are two types of cookies—"session cookies" and "persistent cookies." Session cookies are short-lived, used only during a single browsing session, expire when the user quits the browser, and consequently do not raise privacy concerns. Persistent cookies track information over time or across web sites. They remain stored on visitors' computers until a specified expiration date and can be used to collect information, such as a visitor's areas of interest and individual browsing habits. Persistent cookies may raise the public's apprehension about what information is collected and how it could be used.

The full potential of the Internet to help improve Federal services cannot be realized until U.S. citizens are confident that their online privacy will be safeguarded. Recognizing this, and building on principles established by the Privacy Act of 1974 (5 USC 552a) and the Paperwork Reduction Act of 1995 (Public Law 104-13), the U.S. Government has recently taken steps to help ensure the privacy of visitors to Federal web sites. Specifically, over the past 2 years, OMB issued guidance that establishes the U.S.

² Personally identifiable data includes an individual's name, e-mail address, postal address, telephone number, Social Security number, or credit card number.

Government policy for the use of cookies on department and agency public web sites.³ Taken together, the OMB guidance directs that Federal web sites and contractors operating web sites on behalf of Federal agencies should not use persistent cookies on the web sites unless they provide clear and conspicuous notice of those activities and meet the following conditions: (1) a compelling need to gather the data on the site, (2) appropriate and publicly disclosed privacy safeguards for handling information derived from cookies, and (3) personal approval by the head of the agency. The OMB guidance further exempts Federal use of session cookies from these requirements.

PURPOSE, SCOPE, AND METHODOLOGY

Section 646 of the Treasury and General Government Appropriations Act, 2001, directs all Inspectors General to report on their respective agencies' practices to collect any personally identifiable information from their public Internet sites. Such information could be collected either on an agency's web sites or through third-party agreements. In response to the Act, the Office of Inspector General conducted a review with the specific objectives of (1) identifying the Broadcasting Board of Governors' policies and procedures for managing its Internet web sites in accordance with Federal guidance, (2) determining whether the Broadcasting Board of Governors' web sites use or have entered into third-party agreements concerning the use of cookies, and (3) determining whether all of the Broadcasting Board of Governors' major web entry points have privacy statements posted that adequately reflect what, if any, personal information is collected on the web sites and how that information is used.

To fulfill our review objectives, we researched procedures used at the Broadcasting Board of Governors to govern Internet privacy in accordance with Federal laws and regulations. We met with officials from organizations throughout the Broadcasting Board of Governors to learn how they manage their public Internet sites and whether they collect any personal information on the Internet via cookies, third-party agreements, or other electronic means. We also tested the four Internet sites that we identified within the Broadcasting Board of Governors to determine if cookies are used and whether privacy statements are posted to advise of such practices.⁴ Where necessary, we followed up with responsible officials to obtain explanations of their web management practices and plans for corrective actions.

Appendix A provides details on our methodology for testing the Broadcasting Board of Governors' Internet sites. As a part of this approach, we did not examine every page on a web site, but rather spent a limited time navigating through each site to look for

³ The OMB guidance includes (1) Memorandum M-99-18, *Privacy Policies on Federal Web Sites*, June 2, 1999, (2) Memorandum 00-13, *Privacy Policies and Data Collection on Federal Web Sites*, June 22, 2000, and (3) a letter from the Administrator, OMB Office of Information and Regulatory Affairs, to the Chief Information Office, Department of Commerce, September 5, 2000, clarifying the previously issued guidance.

⁴ We did not include issues related to management of the Broadcasting Board of Governors' internal Intranet sites in our review.

cookie indicators. We also relied on discussions with web management officials to learn about third-party agreements or other practices to collect information on public web sites. To validate our treatment in the report of Internet management practices that the officials described, we obtained comments on a draft of the report from organizations that participated in our review. We have incorporated their comments and suggested changes where appropriate and have included a copy of the comments at Appendix B.

We conducted our review from January to April 2001 at the Broadcasting Board of Governors in Washington, DC. We met with officials from the International Broadcasting Bureau, including the Associate Director for Management and officials from the Office of Internet Development. We conducted this work in conjunction with a similar review of Internet privacy management at the Department of State.⁵ We performed our work in accordance with generally accepted government auditing standards. Major contributors to this report were Frank Deffer, Sondra McCauley, and John Shiffer. Comments or questions about the report can be directed to Mr. Deffer at defferf@state.gov or at (703) 284-2715.

AUDIT FINDINGS

INTERNET PRIVACY GUIDANCE NEEDS TO BE ESTABLISHED

At the time of our review, the Broadcasting Board of Governors had not established agencywide policies for managing its public Internet sites in accordance with Federal web site privacy guidelines. Without such policies, the Broadcasting Board of Governors is limited in its ability to ensure that its bureaus and offices, as well as contractors operating web sites on behalf of the agency, are aware of, and in compliance with, Federal restrictions on the use of Internet cookies and requirements for posting web privacy and security notices.

Although the Broadcasting Board of Governors has no Internet privacy policies in place, the agency has developed *Web Style Guide and Design Specifications* for one of its web sites—www.voanews.com. This style guide outlines the elements that, when combined, create a user-friendly, distinctive web design. The style guide is to be used when adding new pages, features, or information to the web site. However, this guide does not meet Federal requirements for establishing web site privacy management policies.

Broadcasting Board of Governors officials agreed with our concerns that guidance needs to be developed to ensure oversight and compliance with Federal Internet privacy policies. We provided officials with a sample copy of guidance developed by the Department of State, which specifically outlines restrictions on cookie use and requires that privacy statements be posted to Internet sites. Broadcasting Board of Governors officials informed us in mid-April 2001 that they had taken initial steps toward developing their own web privacy guidelines.

⁵ *Departmentwide Web Site Management Needs to be Strengthened*, (01-IT-M-017, March 2001)

Recommendation 1: We recommend the Broadcasting Board of Governors direct the International Broadcasting Bureau to develop and implement policies consistent with Federal web site guidelines prescribed by the Office of Management and Budget.

WEB SITES DO NOT COLLECT PERSONALLY IDENTIFIABLE DATA

The Broadcasting Board of Governors does not use its Internet sites to collect personally identifiable information on site visitors without their awareness. Our review identified two unauthorized uses of persistent cookies on the Broadcasting Board of Governors' web sites; however, the cookies were not used to gather personal data on site visitors. The web site managers have been informed and are currently taking steps to either remove or seek the Broadcasting Board of Governors' approval for the two persistent cookies that we discovered during our review. The Broadcasting Board of Governors has other processes to collect web statistics, trend data, or log files for security purposes, but these processes also are not used to track individual users over time. Given recent legislation and ongoing discussions within the Broadcasting Board of Governors about potentially using the Internet to conduct electronic business, consideration may have to be given in the future to possibly using cookies or other means to collect personal information on web site visitors.

Cookies Generally Not Used on Broadcasting Board of Governors Web Sites

The Broadcasting Board of Governors generally does not use cookies on its public web sites. We found that of the four sites that we visited and tested, in only two instances were persistent cookies used.⁶ We found these persistent cookies on the www.voanews.com/macedonian and www.ibb.gov/marti web pages. The web managers of both web pages told us that they did not know that persistent cookies were being used. The managers are currently taking steps to either remove the persistent cookies that we discovered during our review or seek the required approval for their continued use.

Persistent Cookies Not Used to Collect Personal Data on Web Visitors

In both instances where we found use of unauthorized persistent cookies, we found no evidence that the cookies were used to collect personal data on site visitors. Specifically, on the www.voanews.com/macedonian web pages that had a cookie, web managers used a web site development tool, called ColdFusion. This tool automatically uses persistent cookies, which provide a convenient way to maintain user preferences (i.e., graphics display, screen color, etc.) as a user navigates from one web page to another during a site visit. The user's preferences are automatically removed from memory when the user's session ends. The web manager for this site stated that he was unaware that ColdFusion automatically uses persistent cookies. The Office of Internet Development is trying to determine whether the persistent cookie we identified can be changed into a session cookie. If this is not possible, the office will seek approval from the Broadcasting Board of Governors to continue to use the cookie on the site.

⁶ A web site may include hundreds of pages. A cookie could be used on any of the pages.

We notified officials responsible for the www.ibb.gov/marti web page that we had found a persistent cookie on the web site. We requested an explanation about the cookie and advised that the organization must either remove the cookie from its web site or seek agency head approval for its continued use. Web officials were unaware that their third-party web tracking service used a persistent cookie. The cookie was used to count the number of hits received on the web site. Web managers notified us on April 11, 2001, that they had removed the cookie from the site.

Other Methods for Handling Personally Identifiable Data on Broadcasting Board of Governors Web Sites

OMB guidelines permit several other ways in which personal data may be handled on Broadcasting Board of Governors web sites. For example, for audit and security purposes, the Broadcasting Board of Governors web sites generate log files of when their sites are visited. The log files do not record information on individual web users. Rather, they include information such as Internet protocol addresses,⁷ time frames, and Internet service providers used to access web sites. For example, when a visitor connects from America Online to a Broadcasting Board of Governors web site, the web management system will generate information about the visitor's web domain (aol.com) and the date and time of the visit. The logs are amassed in large files that are stored and secured for 6 months, after which time they are destroyed. In case of computer security incidents, such as hacker intrusions or denials of service, the logs are turned over to security officials for investigation. The Broadcasting Board of Governors also uses the logs to determine web trends, create summary statistics on what information is of most and least interest, or identify systems performance or problem areas. Commercial software programs are available to facilitate the ability of systems administrators to view and analyze the logs.

There are other ways in which personal data might be handled on Broadcasting Board of Governors web sites. For example, a visitor to an agency web site might provide personal information in an e-mail message sent through the site. When this occurs, the Broadcasting Board of Governors uses any information the visitor provides only as a means of responding to the message. Further, the Broadcasting Board of Governors might also collect personally identifiable data through questionnaires, feedback forms, or other means on its public web sites. In these instances, individuals voluntarily provide the personal information to the Broadcasting Board of Governors; the information is not collected on the web site without the individuals' knowledge. We found that no unauthorized ways of handling personal information were used—either directly or through third-party agreements—on the Broadcasting Board of Governors web sites that we reviewed.

⁷ An Internet protocol address is a series of numbers used to identify a computer on the Internet. When transferring data from one computer to another, both the sending and receiving Internet protocol addresses are attached to the data packet to allow two-way communications.

Potential Need for Persistent Cookies in the Future

Although current Federal guidelines restrict cookie use, senior Broadcasting Board of Governors officials told us that it might be necessary in the future to use cookies on Internet web sites in order to improve the quality of service to the public. For example, Section 1704 of the Government Paperwork Elimination Act⁸ requires that by 2003, executive agencies provide options for the electronic maintenance, submission, or disclosure of information, when practical, as a substitute for paper. To comply with the law, agencies may find it necessary to use cookies on their web sites. Currently, Broadcasting Board of Governors web sites deliver multimedia news and information to international audiences and inform the public about agency activities. However, in the future, the agency may wish to allow users to customize their view of agency web sites to display only specified information. Cookies may be needed to remember the user preferences.

Recommendation 2: We recommend that, in accordance with established Federal guidelines, the Broadcasting Board of Governors direct all bureaus and offices to inspect their web sites to identify any persistent cookies and either remove the cookies or request agency head approval for their continued use.

PRIVACY STATEMENTS NOT CONSISTENTLY POSTED ON AGENCY WEB SITES

We found that Broadcasting Board of Governors web sites do not always comply with Federal requirements for posting privacy notices on their Internet sites. The privacy statements are intended to advise site visitors of what information the agency collects about individuals, why the agency collects it, and how the agency will use it. The general practice is to provide a link on the initial home page that provides a central location for various disclaimers and legal notices to cover the web site as a whole. Additional privacy notices are also needed wherever information is collected from the public on the web site.

However, as of early March 2001, one of the four Internet web sites we reviewed – monitor.ibb.gov – had no privacy statement and therefore no means of advising users of any information potentially collected on the site. The web manager stated that he was unaware of the requirement to post a privacy statement and agreed to take corrective action.

Since web managers of the two web pages that had persistent cookies were unaware of the cookies' existence, managers did not address cookie use in their privacy statements. Their privacy statements did, however, outline web site policies for collecting and storing information on visitors to the web sites for statistical purposes. In addition, any information that is provided by visitors through the web sites in the form of e-mails, questionnaires, feedback forms, or others means is used to improve customer service and is not transferred to any third parties. As discussed above, none of the persistent cookies identified were used to track or collect personal data on individual site

⁸ *Government Paperwork Elimination Act*, 44 USC 3504, October 1998.

users. The agency stated in its written response to the draft report that it would update the web privacy policy on the www.voanews.com site to advise visitors about cookie usage on the site.

Recommendation 3: We recommend that the Broadcasting Board of Governors direct all agency bureaus and offices to examine their web sites to ensure that complete and up-to-date privacy statements are posted, or appropriately linked to privacy statements on the primary agency web site, advising site visitors of any cookie use or of any personally identifiable data that is collected, stored, or used by the web site for any purpose.

AGENCY COMMENTS AND OUR EVALUATION

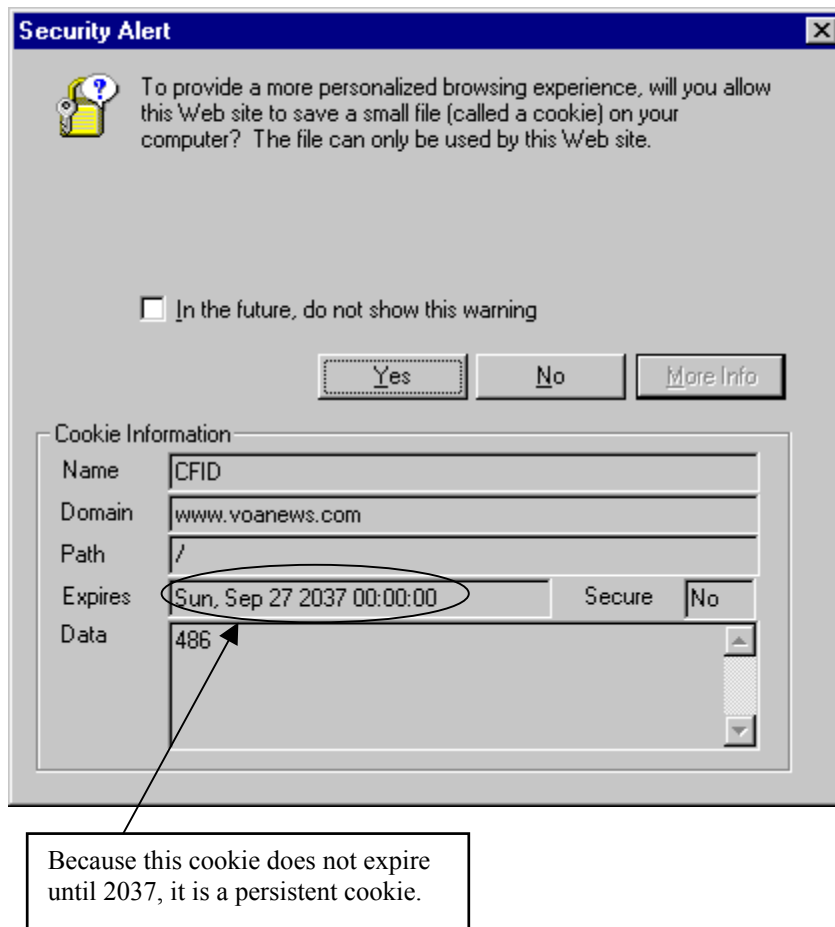
The Broadcasting Board of Governors provided written comments on a draft of this report. A copy of the agency's comments is included as Appendix B. The Broadcasting Board of Governors concurred with all of our recommendations and agreed to take corrective action. Specifically, concerning Recommendation 1, on behalf of the Broadcasting Board of Governors, the Associate Director for Management of the International Broadcasting Bureau requested that the Office of Internet Development draft a proposed agency policy directive consistent with Federal web site guidelines. The Broadcasting Board of Governors expects to implement these guidelines by August 1, 2001, if not earlier.

Concerning Recommendation 2, the Broadcasting Board of Governors stated that it is inspecting its web sites to identify any persistent cookies used. The Office of Internet Development is studying whether the persistent cookie found on www.voanews.com/macedonian page can be changed to a session cookie. In addition, an action memorandum has been drafted for signature by the agency head requesting approval to restrict use of cookies on the agency's public web sites to several specific circumstances. In response to Recommendation 3, the Broadcasting Board of Governors has agreed to update the privacy policy on the www.voanews.com web site to reflect the presence of a persistent cookie until the cookie can be removed.

WEB SITE TEST METHODOLOGY

We reviewed the four Internet web sites that we identified within the Broadcasting Board of Governors from March 7 through March 30, 2001. Our review entailed navigating through the web pages within each site--generally spending 8 to 20 minutes per site--to determine whether the site used cookies and posted a privacy statement advising of this practice and any other automated activities to collect personal data. To determine cookie use on the web site, we first had to change the security settings on Microsoft's Internet Explorer so that the browser would prompt us if web sites tried to place cookies on our computer. For each web site visited, we printed a copy of the site's home page, privacy statement, and any cookie notification⁹ that appeared. We also examined the cookie notification to determine whether session or persistent cookies were used. Figure 1 below provides an example of a persistent cookie notification.

Figure 1: *Sample Persistent Cookie Notification*

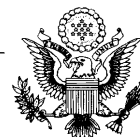


⁹ Such cookie notifications do not adequately fulfill OMB requirements to post clear, conspicuous privacy statements at major web entry points to reflect what, if any, personal information is collected on web sites and how that information is used.

AGENCY COMMENTS¹⁰

Broadcasting Board of Governors

INTERNATIONAL BROADCASTING BUREAU



MAY - 1 2001

Mr. Frank Deffer
Acting Assistant Inspector General
Information Technology Issues
Office of the Inspector General

Dear Mr. Deffer:

This is in response to your letter of April 23, 2001, to Mr. Marc B. Nathanson, Chairman, Broadcasting Board of Governors (BBG), requesting comments on the OIG's draft Memorandum Report 01-IT-M-039, titled "Broadcasting Board of Governors' Web Site Management Needs Improvement, April 2001." The Broadcasting Board of Governors (BBG) and the International Broadcasting Bureau (IBB) have reviewed the memorandum and provide the following comments and responses to the recommendations:

BBG's OVERALL COMMENTS

Over the last several months, the Broadcasting Board of Governors (BBG), through the International Broadcasting Bureau (IBB), has taken several actions to facilitate comprehensive implementation of federal policies related to Web site management. These include appointing IBB's first Associate Director of Management, creating an Office of Internet Development, and establishing a *Broadcast Technology Steering Committee* among senior managers. The new Associate Director of Management has commissioned updates of IBB information-handling policies and procedures -- and specifically asked the Office of Internet Development to draft guidelines implementing federal privacy policies on public Web sites. The *Broadcast Technology Steering Committee* will provide an apt forum for initial discussion and dissemination of these required directives. This changing organizational context provides useful background to specific suggestions from *Memorandum Report 01-IT-M-039*.

Recommendation 1: We recommend that the Chairman of the Broadcasting Board of Governors direct the International Broadcasting Bureau to develop and implement policies consistent with the Federal Web site guidelines prescribed by OMB.

BBG Response: The IBB concurs with this recommendation. On behalf of the BBG, the IBB Associate Director for Management requested the Office of Internet Development (OID) to draft a proposed agency policy directive that would be consistent with Federal Web site guidelines. The policy will include references to OMB's Memorandum M-99, *Privacy Policies of Federal Web Sites, June 2, 1999*, and Memorandum 00-13, *Privacy Policies and Data Collection of*

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Washington, DC 20237

¹⁰ The draft report title, *Broadcasting Board of Governors' Web Site Management Needs Improvement*, was changed for final publication to *More Guidance and Oversight Can Improve Broadcasting Board of Governors' Web Site Privacy*.

AGENCY COMMENTS (continued)

- 2 -

Federal Web Sites, June 22, 2000. In keeping with this guidance, policies under development by OID mandate that:

- ◆ BBG public Web sites are prohibited from gathering **any** personal information acquired involuntarily from Web site visitors.
- ◆ BBG public Web sites will prominently display a Web site privacy policy statement including privacy safeguards, how Web site statistics are gathered, how e-mail is handled, and any applicable use of persistent cookies on the site.
- ◆ BBG public Web sites will only employ cookies when there is a compelling need to use cookies for the proper functioning of the site. Session cookies will always be used in preference to persistent cookies, unless the lack of a persistent cookie obstructs the proper functioning of the site. Agency head approval is required for such use of persistent cookies.

Once finalized and signed by the Director, IBB, these guidelines will be implemented throughout the agency and disseminated via multiple channels. We expect all of these measures to be accomplished before August 1, 2001.

Recommendation 2: We recommend that, in accordance with established Federal guidelines, the Chairman direct all Broadcasting Board of Governors bureaus and offices to inspect their Web sites to identify any persistent cookies and either remove the cookies or request agency head approval for their continued use.

BBG Response: The IBB concurs with this recommendation. This inspection is now underway and will be completed before August 1, 2001. With regard to the cookie identified on the VOAnews.com Macedonian page, the Office of Internet Development is investigating if this persistent cookie introduced by the Cold Fusion Web development tool can be transformed to a session cookie. (As noted in the OIG draft Memorandum Report 01-IT-M-039, session cookies leave no data files on site visitors' computers, and are exempted from OMB requirements for public disclosure and agency head approval.)

In addition, an action memorandum has been drafted for signature by the agency head requesting approval to restrict agency use of cookies on public Web sites to the following conditions:

- ◆ Cookies will not be employed on the agency's public Web sites unless the proper functioning of the Web site requires their use.
- ◆ Session cookies will always be preferred to persistent cookies.
- ◆ Cookies will never be used on the agency's public Web sites to gather personally identifiable information from site visitors.

APPENDIX B

AGENCY COMMENTS (continued)

- 3 -

- ◆ If any persistent cookies are used to ensure the proper functioning of a public agency Web site, a prominently posted privacy statement will advise site visitors of how and why such cookies are used.
- ◆ All contractors performing work supporting BBG public Web sites must abide by the privacy policies governing cookies that are detailed above.

Recommendation 3: We recommend that the Chairman of the Broadcasting Board of Governors direct all agency bureaus and offices to examine their Web sites to ensure that complete and up-to-date privacy statements are posted, or appropriately linked to privacy statements on the primary agency Web site, advising site visitors of any cookie use or personally identifiable data that is collected, stored, or used by the Web site for any purpose.

BBG Response: The IBB concurs with this recommendation. In addition, the Office of Internet Development will update the VOA Web site privacy policy notice by May 1, 2001. In keeping with OMB recommendations, this update will resemble the privacy policy posted at www.whitehouse.gov/privacy.html. Until the persistent Cold Fusion cookie identified on the VOA Macedonian Web page is modified, this notice will advise site visitors about the site's cookie usage, and inform them that no cookie stores any personally identifiable data obtained from site visitors. If the persistent cookie can be removed without obstructing the proper functioning of the Web site, the privacy notice will be appropriately modified. If such removal is infeasible, agency head approval will be acquired as explained in the BBG response to Recommendation 2.

In addition, the Office of Internet Development will coordinate with the Web administration staff of Radio and TV Marti to update their privacy policy per OMB guidelines before June 1, 2001. Together, these steps will bring the privacy statements on all BBG public Web sites into conformance with OMB Web site privacy guidelines.

We thank you for the opportunity to provide our comments to the draft report. Should you have any questions, please do not hesitate to contact me at (202) 619-3988, or contact Linda D. Harrison, Management Analyst, at (202) 619-3179.

Sincerely,



Dennis D. Sokol
Director of Administration