

Visitor Authentication in Maytag Home Solutions (MT192003)

Objective

This document explains the processes connected with signing in a user to the Maytag Home Solutions site (MHS, MT192003), including the way various pages on the site interact with the signin process. We go into particular detail on the Register a Product interaction with the Sign-in/up page, because of its complexity.

Membership & Sign-in States

In MHS we distinguish members as being "My Maytag Member" vs. "Anonymous" (users who have not yet signed up). In pure Broadvision terms, however, every visitor to the site is made a Member from the first moment they visit. For a user with a cookies-enabled browser, the user is automatically authenticated and connected up to their visitor profile on every visit to the site. Signing in adds only the cosmetic difference of explicitly recognizing the user (greeting them by name and allowing unrestricted entry into My Maytag sections).

The visitor architecture and cookie method for tracking users and automatically connecting them to their profile is discussed in detail at the document "Visitor Management in Maytag Home Solutions (MT192003)" (http://eroom.giantstep.com/eroom/giantstep/White/764_31).

All signup functionality is contained on the single page on the site, called Sign-in/step. Signing in, signing up, and signing out can occur only by having the browser visit this page. We avoided having special versions of Signin/up for each part of the site that would need it (say for example, having Register a Product contain it's own Email/Username and Password fields) to ensure quality control. Having multiple versions of the signin process scattered through the site would require coordinated maintenance of each version, which would introduce undesirable risk. However, there may be other ways to enforce this modularity.

The Sign-in page


The Sign-in process challenges the user to supply their Email/Username and password. A My Maytag Member with a cookie is already connected with their visitor profile, and

completing Sign-in (responding correctly to the username & password challenge) turns on My Maytag Recognition. This puts a personalized greeting on the home page, and allows unrestricted access to My Maytag sections. For an Anonymous user (which includes first-time users, users who are My Maytag Members but have no cookie on the machine indicating it, and cookies-disabled users), the sign-in discards the existing anonymous profile, connects up with their visitor profile, and then turns on My Maytag Recognition.

The `signin_signup.jsp` page calls the sign-in page by passing "mode=signin" on the querystring. This page defines the function `signinValidation()` which validates form input. This function also does the actual signing which does the following:

- Sets `Session.signedIn` to true (this turns on My Maytag Recognition)
- Updates the user's email address and "remember me" state on the cookie

The visual appearance of the page is shown below. The function `signinForm()` generates the HTML form and is defined in `signin_signup.jsp`. Note that the user can instead choose to sign up (create a new My Maytag Member) from this page, by clicking the link on the lower right.

THE MAYTAG HOME		My Maytag	Where to Buy	Appliance Breakthroughs	Our Company
My Maytag		MAYTAG PRODUCTS	IDEAS + ADVICE	CUSTOMER SERVICE	VIEW CART
Sign In					
<p>Returning members, please sign in below.</p> <p>E-mail: <input type="text"/></p> <p>Password: <input type="password"/></p> <p>I forgot my password.</p> <p><input type="checkbox"/> Remember me each time I return to Maytag.com (your browser must support cookies for this feature) what's this?</p> <p>SIGN IN</p>			<p> New to Maytag.com? Sign up!</p> <p>By signing up, you can take advantage of these My Maytag benefits:</p> <ul style="list-style-type: none">• Quickly access information about Maytag appliances you have registered online, including purchase details, use & care, warranty and service information.• Save products you're considering to purchase and print a customized shopping guide for easy reference. <p>SIGN UP</p>		

The Sign-up page

The Sign-up process challenges the user to choose an Email/Username, password (with additional confirmation field), first and last names, remember me option, confirm they are 13 years or older, and answers to opt-in email questions. When the user successfully fills out the page, sign-up updates their visitor profile (if the user was previously anonymous), or replaces the current visitor profile (if a new My Maytag Member was created while another one was already active) and then turns on My Maytag Recognition.

The signin_signup.jsp page calls the sign-up page by passing "mode=signup" on the querystring. This page defines the function signupValidation() which validates form input. The actual signing up of the user consists of a profile update in this function, plus a call to ConvertGuidToEMail(), which resides in /startup/mths.js. ConvertGuidToEMail() does the following:

- Makes a new account with visitorMgr.newVisitor()
- OR Updates the existing anonymous user's account data (updates the USER_ALIAS and PASSWORD fields of table BV_USER.
- Sets Session.signedIn to true (this turns on My Maytag Recognition)
- Updates the user's email address and "remember me" state on the cookie

The HTML is generated by the same function that generates Sign-in HTML (an argument distinguishes them). The visual appearance of the page (top portion only) is shown below.

THE MAYTAG HOME


My MaytagWhere to BuyAppliance BreakthroughsOur Company

My Maytag

MAYTAG
PRODUCTS

IDEAS +
ADVICE

CUSTOMER
SERVICE


VIEW CART

Sign Up

Start enjoying the benefits of having your own personal area at Maytag.com! Please complete the following information to sign up:

Your Information

Maytag respects your privacy and will keep all information confidential (see our [privacy policy](#)).

* indicates required information

First Name: *

Last Name: *

E-mail: *

Password: *

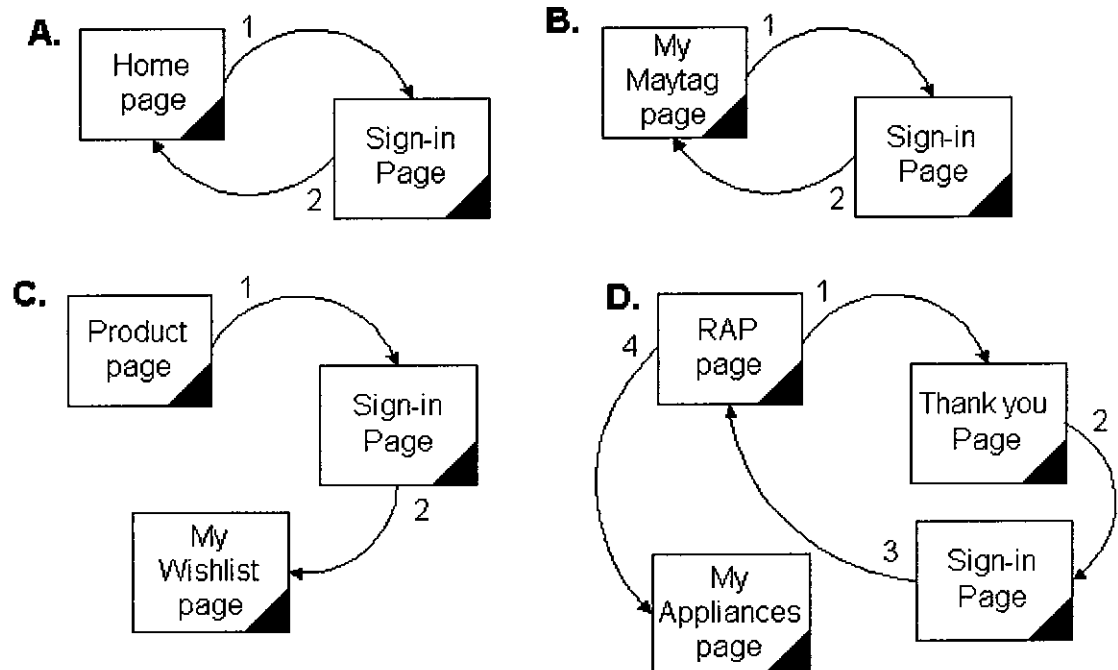
Confirm Password: *

Additionally the Signin/up page has a "Sign Out" functionality. This generates no visual page, however, so functionality is included to indicate where the page should redirect to when Sign Out is complete (to be discussed later).

Sign-in Page Interactions

MHS is a membership site, meaning that certain sections of the site can be reached only by members. We wished to minimize any disruption of the user experience if a page to which they were navigating required a Sign-in/up along the way. We handled these by a structure for sending these members-only pages to the Sign-in/up pages along with baggage that would instruct the Sign-in/up page where to direct to when complete. This way the user would reach the destination page with the fewest number of clicks.

The figure below shows four of the interactions between Sign-in/up and other pages, and the sequence of redirects that occur between them.



- **Scenario A:** shows what happens when a user signs in from the home page. The user is sent to the signin page, within which they can either sign in to an existing account or create a new one. When the process is done, the user is redirected back to the home page.
- **Scenario B:** this is triggered when a user who is not signed in attempts to visit the *My Maytag* section of the site. The user is sent to the signin page as in scenario A, after which he is redirected to the intended destination of the *My Maytag* page.
- **Scenario C:** this is triggered when a user who is not signed in chooses a product to place into their *My Wishlist*. The user is sent to the signin page as in scenarios A & B, after which he is redirected to the intended destination of the *My Wishlist* page.
- **Scenario D:** *Register A Product (RAP)* accomplishes two tasks: product registration with MCS and placement of the product into the *My Appliances* page. The first

requires no sign-in but the second does, so the product insertion must be interrupted to get the user to sign in. Because of its greater complexity, we discuss this process in greater detail below.

Page Redirect Coding

For scenarios **A**, **B** and **C** we employed a simple code that is carried on the querystring to the Sign-in/up page, which tells Sign-in/up the final destination page. For example, here the URL for the "Sign in" link which appears on the home page:

[*http://www.maytag.com/mths/mymaytag/signin_signup.jsp?mode=signout&redirect=on&dest=home*](http://www.maytag.com/mths/mymaytag/signin_signup.jsp?mode=signout&redirect=on&dest=home)¹

The "mode" argument tells the Sign-in/up page to run the sign-out module. The "redirect" argument indicates that a redirect is to take place when done, and "dest" supplies the code that Sign-in/up page understands to convert to a redirect to [*http://www.maytag.com/mths/homepage.jsp*](http://www.maytag.com/mths/homepage.jsp).

For scenario **D**, the page destination following Sign-in/up processing was a lengthy URL, including data for the 21 fields of the RAP form. Here is a sample:

[*http://www.maytag.com/mths/cust_serv/register_product/register_product.jsp?mode=finishRegistering&ModelNumber=CSE9000ACE&SerialNumber=3333-3333&InstallDate=04%2f20%2f1999&PurchasedESP=N&ExpireDate=01%2f01%2f2001&FirstName=Fred&LastName=Flinstone&StreetAddress=123+Boulder+Drive&AptNumber=2a&City=Bedrock&State=IL&Zip=11111&Country=United+States&EveningPhone=1231231234&DayPhone=&Email=scoot1%40foo.com&WantMessage=Y&GraphicsEnabled=Y&formHowDidYouHearID=4*](http://www.maytag.com/mths/cust_serv/register_product/register_product.jsp?mode=finishRegistering&ModelNumber=CSE9000ACE&SerialNumber=3333-3333&InstallDate=04%2f20%2f1999&PurchasedESP=N&ExpireDate=01%2f01%2f2001&FirstName=Fred&LastName=Flinstone&StreetAddress=123+Boulder+Drive&AptNumber=2a&City=Bedrock&State=IL&Zip=11111&Country=United+States&EveningPhone=1231231234&DayPhone=&Email=scoot1%40foo.com&WantMessage=Y&GraphicsEnabled=Y&formHowDidYouHearID=4)

Here the redirect is a complex set of data which cannot be encoded into a single "dest" field. Because some of the items on the querystring of the destination URL are already URLencoded, it is impractical to put the entire URL on the querystring for the Sign-in/up page because it would need to be URLencoded yet again. The decoding that would be necessary at the end would be messy if not impossible. Instead, we store the URL in a globally-available Session variable, Session.destinationURL, and pass on instructions on the Sign-in/up querystring:

[*http://www.maytag.com/mths/mymaytag/signin_signup.jsp?mode=signin&redirect=on&email=greg@giantstep.com*](http://www.maytag.com/mths/mymaytag/signin_signup.jsp?mode=signin&redirect=on&email=greg@giantstep.com)

In this case, it is telling Sign-in/up to pre-populate the sign-in form with the email address greg@giantstep.com. There is a "redirect" argument, but not a "dest"; this is what tells Sign-in/up to look in Session.destinationURL for the target URL to go after Sign-in/up is done.

Register a Product

The interaction of Sign-in/up with RAP (scenario **D** above) has a particularly complex interaction with the Sign-in/up page, which we will discuss in detail now. Essentially, the page is leveraging My Maytag Membership from the RAP process.

Note that there are a total of 21 different fields that the user fills out and which RAP must process.

¹ The cookie state and session tracking parts of the URL have been removed for clarity

The top portion of the RAP screen is shown below. This particular instance is for a case where a user is not currently signed in to the site. Note that there is an empty HTML field for the user's email address.



Register a Product

Please complete the following information to register your Maytag product online. [Registration by telephone or mail is also available.](#) [Why register?](#)

* indicates required information

Email* (if you are a member of My Maytag, please [Sign in](#). Please note that if you choose not to sign up now, you won't be able to access this registration online in the future.)

Product Information

Model Number* (How to locate model and serial numbers)

Serial Number*

Date of installation (mm/dd/yyyy)*

Did you purchase an extended warranty

☐ yes

☒ no

If yes, when does it expire? (mm/dd/yyyy)

Owner Information

Maytag respects your privacy and will keep all information confidential (see our [privacy policy](#)). We will not contact you without your permission unless obligated to do so in the unlikely event that a safety modification is issued for your product under the consumer product safety act.

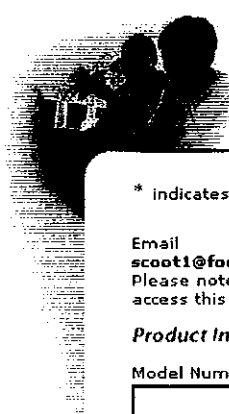
First Name*

Last Name*

Street Address*

Apartment Number/Suite/Floor

There is an alternate look for the case where a My Maytag Member is signed in. The user's email address is "hard coded", as shown in the excerpt below:



Register a Product

Please complete the following information to register your Maytag product online. [Registration by telephone or mail is also available.](#) [Why register?](#)

* indicates required information

Email
scoot1@foo.com (if this is not your email address, please [Sign In](#). Please note that if you choose not to sign in now, you won't be able to access this registration online in the future.)

Product Information

Model Number * ([How to locate model and serial numbers](#))


Both versions of the page have a "sign in" link that sends the user to the Sign-in/up page, and then back to the RAP page when finished. This link is independent from the RAP form, so that any data they input to the form will be lost (i.e. the RAP page will be blank again when they return from Sign-in/up). This link allows the user to login, or if they are already logged in, change to a different user, or create a new My Maytag Member. In any of these cases, when they finish, and are sent back to the RAP page, they will be signed in and their email address will appear in "hard coded" form.

Following RAP form validation, the user is presented the Thank You page as shown below. (The specific message varies according to the situation, as discussed below.)

THE MAYTAG HOME

My Maytag | Where to Buy | Appliance Breakthroughs | Our Company

Customer Service

MAYTAG PRODUCTS | IDEAS + ADVICE | CUSTOMER SERVICE |  VIEW CART

Brochures + Videos | Fix It Yourself | Register a Product | Warranty + Service Plans | Service + Repair | Manuals | Contact Us

Register a Product

Thank you for registering your Maytag product. A copy of this product registration has been saved to "My Maytag" so you can keep track of the appliance's warranty status and more.

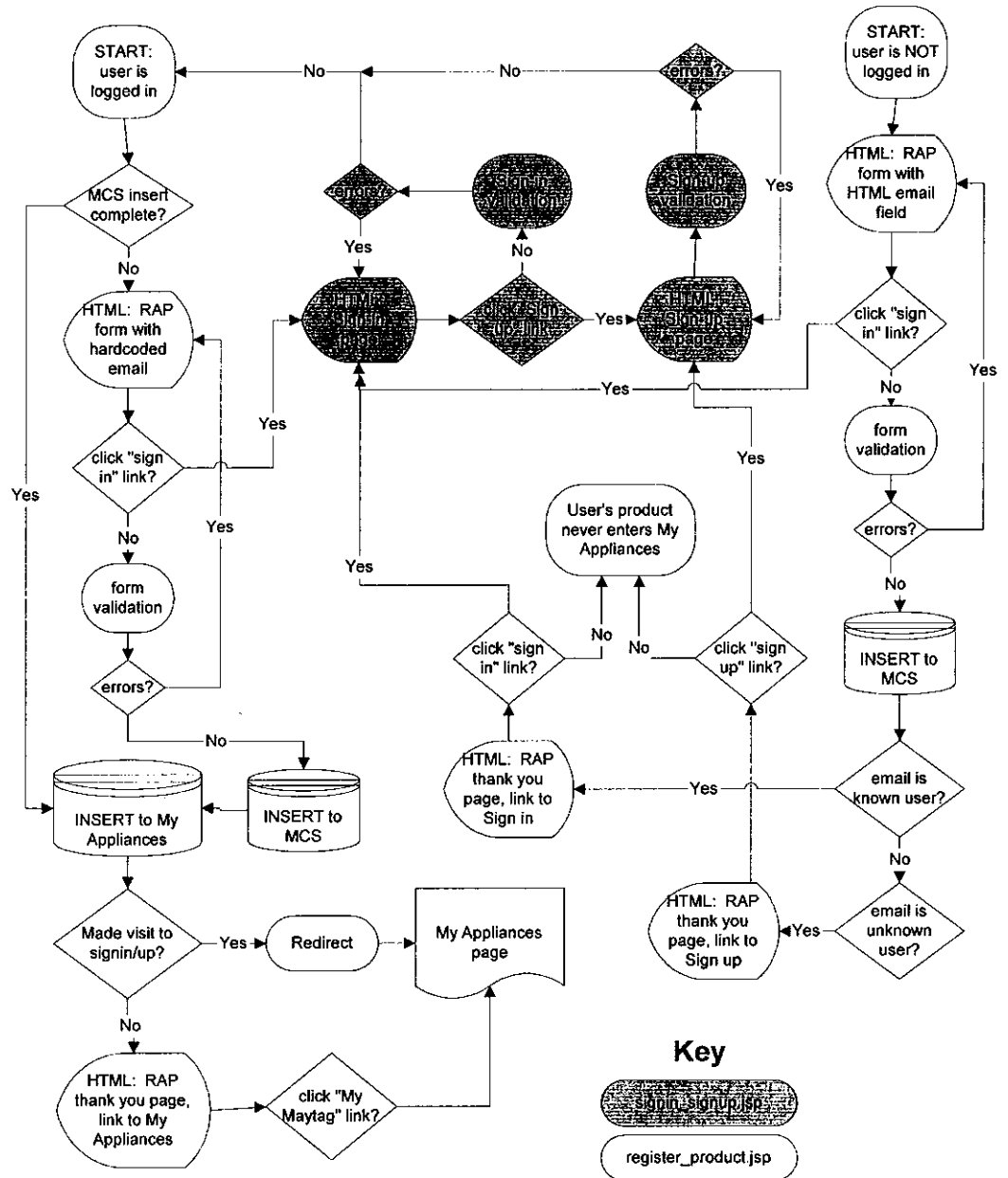
Please [Sign in](#) to My Maytag to view this registration.

One of the key complexities of RAP is that it is used both for "standard" product registration with Maytag's MCS department, and for getting a product inserted into "My Appliances". We want the former to have no restrictions, whereas the latter we want to restrict to My Maytag Members; and we want this to be taken care of in as swift and

seamless a manner as possible. When this requirement is combined with the different possible user states that may be in effect at the start of the RAP process, there is a number of different paths through the process (shown below in a flowchart). Here are descriptions of several of the possible flows:

- Starting condition: user already signed in. User intent: register a product with my My Maytag account. The RAP page will have a hard coded mail address. After the RAP form is successfully validated, MCS registration and placement into My Appliances happens in succession without interruption. The Sign-in/up page is not involved. The user is presented with the Thank You page with a link to the My Appliances page.
- Starting condition: user already signed in. User intent: register a product with a new My Maytag account. The RAP page will have a hard coded mail address. The user presses the "Sign in" link at the top of the RAP page, and is sent to the Sign In page. He clicks Sign Up from there, and creates a new user. When done, the user is sent back to RAP, which shows the new hardcoded email address. After the RAP form is successfully validated, MCS registration and placement into My Appliances happens in succession without interruption. The user is presented with the Thank You page with a link to the My Appliances page.
- Starting condition: user not signed in. User intent: register a product with an existing My Maytag account. The RAP page will have an empty HTML field for the email address. The user enters the My Maytag Member email address and the rest of the RAP form. He presses submit and the RAP page validates the data. If it succeeds, the MCS registration occurs, and the user sees a Thank You page with a link to the Sign in page (because the code recognized that as a valid Member email address). When he clicks to the Sign-in page, he signs in with the member account (which is pre-populated in the Email field). When this succeeds, the user is redirected immediately to My Appliances.
- Starting condition: user not signed in. User intent: register a product with a new My Maytag account. The RAP page will have an empty HTML field for the email address. The user enters his email address (which corresponds to no currently existing member) and fills out the rest of the RAP form. He presses submit and the RAP page validates the data. If it succeeds, the MCS registration occurs, and the user sees a Thank You page with a link to the Sign up page (because the code recognized that as an invalid Member email address). When he clicks to the Sign-up page, he signs up with the member account (which is pre-populated in the Email field). When this succeeds, the user is redirected immediately to My Appliances.

The complete flow of the RAP and Sign-in/up process is shown below:



Glossary

With the previous discussion in mind, the following operational definitions will be used in this document:

- **Member (Broadvision sense):** an account created with the Broadvision .newVisitor() command. All visitors to the site become a Member in the Broadvision sense.
- **Anonymous Member:** the name we give to a Member who has not yet Signed Up for the site. All users of the site start out this way.
- **My Maytag Member:** A Member who Signed Up (has selected an email/username and password). This user has transitioned from Anonymous to My Maytag Member.
- **Email/Username:** The "user name" for a My Maytag account (must be a valid email address).
- **Visitor authentication:** Connecting an active session to the visitor profile for a known Member account (in the Broadvision sense). Happens behind the scenes automatically, for both Anonymous and My Maytag members (assuming that cookies are enabled).
- **My Maytag Recognition:** The behavior of the site when after a My Maytag Member signs in:
- **Signing in:** Specifically, the act of visiting the signin page to enter a username and password to be and recognized on the site. For most users (cookies-enabled), Visitor Authentication has occurred earlier, and the only action here that results in My Maytag Recognition being turned on. For cookies disabled users, Visitor Authentication happens here as well.
- **Signing up:** A user's visit to the Sign Up page, in which they select an Email/Username and a password. After finishing, My Maytag Recognition is turned on for this new user. Customarily, what is happening is that an anonymous member is being transitioned to a My Maytag Member; however, it is also possible for a signed in My Maytag Member to visit the Sign Up page and create a new My Maytag Member.
- **Auto Sign-in:** the automatic action which turns on My Maytag Recognition. This occurs if the user's cookie is set to do so.