QUALITY ASSURANCE INSTRUCTIONS

Quality Assurance Goals

What are the goals of the QA process?

Ensure that the site functions properly on most popular platforms. Test for link errors, spelling, image loading, content placement and completeness, table layout, javascript functionality, graphics/tree diagram optimization. Ideally, a complete alpha test will be finished in time for presentation of site at the AToL project's Fall grant renewal meeting.

Methodology

What QA methodology will the project team follow?

Light/Informal QA: For projects with budget under $30,000, estimate the QA budget at 1% to 3% of project cost. Technical level: light	Yes
Semi-formal QA: For projects with budgets ranging between $30,000 and $70,000, estimate the QA budget at 5% of project cost. Technical level: moderate	No
Formal QA: For projects with budgets over $70,000, estimate the QA budget at 10% to 20% of project cost. Technical level: moderate to complex	No

Due to the size of the development team and lack of funds in the current round of grant funding, minimal quality assurance tests will be performed.

- Develop a complete plan for informal testing
- Create a resource allocation, budget and schedule grid

Resource Allocation

Please indicate resources available, including team members, equipment and software:

Team Members:
• Noreen Whysel will perform most design, development, programming and testing functions.
• Andrew Vallely, graduate student, will provide and test content, and perform beta testing.
• The Ornithology Department employs two student interns who can help with production, including content population, light HTML coding and beta testing, etc.

Equipment:
• Dell Pentium IV with IE 7.0/6.0, NN 7.0/6.0 and AOL 3.0
• Macintosh G4 with IE 7.0/6.0, NN 7.0/6.0 and AOL 3.0

Software:
• FTP: Filezilla/PC and Fetch 3.0/Mac
• Page Design: Dreamweaver MX, Notepad and BBEdit
• Images: Fireworks and Photoshop for image enhancement and web optimization
• HTML Validation: HTML Tidy or Page Valet http://valet.webthing.com/page/
• Spell Checker: Dreamweaver internal spell checker
• Link Checker: Link Valet http://valet.webthing.com/link
• Accessibility Validation: AccessValet http://valet.webthing.com/access
• Load Test: N/A

Schedule

Please indicate, on a separate Excel spreadsheet, the project schedule, including team roles, hours and completion dates.

Basic/Standard Testing Procedures

Smoke Test: Testing without a formal test plan, also called "*ad hoc*" or "guerilla testing." Often, due to time and resources, this is the only type of testing conducted prior to launch.	No
Alpha Test: Also referred to as "internal testing," alpha testing is the initial testing of a site after the production and functionality are in place, but prior to public display.	Yes
Usability Test: Analysis of a user interacting with the site's interface through task-oriented actions, usability testing determines a site's ease of use through observation.	Yes, informally with graduate student
User Acceptance Test: Usually performed through a number of specific tests, user acceptance is dependent on scope, budget, and expertise. User acceptance verifies customer requirements (platform, browser, operating system, connection speed, and so on.	Yes, basic configuration test
Content Check: The content check confirms content placement (not just copy – check also for image utilization and positioning), spelling, and syntax.	Yes
Beta Testing: A final check to confirm that all is functioning as intended prior to launch, beta testing is generally performed on the client staging site or in a subdirectory on the live server.	Yes, after moving from developer site to client staging site.

Summarize status and results of tests below:

Alpha Test: The site developer is conducting the alpha test on an *ad hoc* basis. As new design and functionality is introduced, it is thoroughly tested and discussed with the client. Main issues that have been resolved include accommodating varying tree graphic widths, javascript rollovers and ease of updating feature content.

Usability Test: Usability testing resulted in a need for clearer graphic tree diagrams. Taxon nodes will be highlighted on current pages with background color rollovers indicating clickable nodes. An issue was raised as to how to indicate nodes that do not have corresponding pages. For now, these nodes will simply not be linked or rollover-enabled.

Labeling is a more complicated academic issue and will be addressed on an ongoing basis. Bird phylogeny follows an overall, hierarchical formula, but it can be misleading, given recent DNA research that contests the placement of individual families and entire orders.

Noreen Y. Whysel Information Services/Website Design   Page 3 of 7
whysel@mindspring.com
(917) 826-9644

Because certain taxa are in dispute, a strict hierarchical formula is inadequate. Therefore, file structure will be flat. To enhance usability, tree navigation will be coupled with alphabetical lists by taxon name and by common name and a search function.

Configuration Test: The following configurations were tested to ensure that the site operates without error:

	NET 7.x	NET 6.x	NET 4.x	IE 6.0	IE 5.0	IE 4.0	AOL 4.0	AOL 3.0
Mac OS9	✓	✓		✓	✓		✓	
WIN 2000	✓	✓		✓	✓		✓	
WIN NT	✓	✓		✓	✓		✓	
WIN XP	✓	✓		✓	✓		✓	
Unix	✓	✓		✓	✓		✓	

Please note any errors encountered, specifying the configuration (browser/version, platform, connection speed):

- Home Page: Netscape 7.0 does not show the light blue background color on rollover in the tree diagram, but it does show on the other pages. Check for background: inheritance issue. Loads fine in other configurations.
- Phylogenetic Trees: HTML-based tree diagrams, using a one-pixel graphic to draw tree lines and text-based node links, replaced tree jpegs to reduce load time. Performance was significantly improved, since only a single image file needed to be downloaded. Also, any future changes to the placement of a taxon within the tree will be much easier to complete -- a simple change to a table row rather than an entirely new graphic. Finally, HTML diagrams are an appropriate output format, should we move to an XML based tree diagram/database outputting with Scalable Vector Graphics (SVG).

Advanced/Formal Testing Procedures

Load Test: Also called "stress testing," load testing utilizes software that simulates multiple users hitting the site simultaneously to determine a server's breaking point.	No
Functional Testing: Also known as "black box" testing, functional testing confirms actual functionality against the specification document. Specific setup involves the person testing the functionality having knowledge of the intended outcome, but not the programming details.	No
Unit Tests: A test of individual components on a web page to make sure they function as specified, unit tests are verifications conducted before the code is submitted for integration of intended versus actual functionality and response.	Yes
Regression Test: Also known as "re-testing," regression testing confirms that all tracked bugs have been fixed, that the old code is still working as intended, and that no new problems were created due to said fixes. Note: The level of regression testing and confirmation varies widely.	Yes
Security Test: A check that confirms that database and transactional information is secure from unauthorized users or hackers; a security test usually involves inside understanding of the server setup.	No

Summarize status and results of tests below:

Unit Tests: Each component is tested individually before integrating with the site. This includes the navigation drop-down menus and the HTML taxon trees.

Regression Tests: Regression tests will be performed on an *ad hoc* basis.

Bug Tracking Plan

Create a bug-tracking plan in Excel. List each bug separately including problem, team responsible, priority, proposed solution and task schedule, with signoff by appropriate team. Perform the following bug-tracking steps:

Validation:
- HTML Validation
- Spell Checker
- Link Check
- Accessibility Validation

Content Check:
- Graphics – loading, optimization
- File Paths – links
- Tables – layout, widths
- Javascript/DHTML – rollovers, drop-down menus
- Navigation – complete, usable, no orphan pages

Pre-Launch Confirmation of Fixes/Signoff/Initial

A Pre-Launch Confirmation letter, certifying that any problems or bus have been thoroughly tested and fixed prior to launch, will be required before migrating the site to the public server.

Post-Launch Confirmation of Fixes/Signoff/Initial

After launching the site on the client's live server, additional errors or bugs may be required. A thorough regression test of the site will be performed after launching the site. When this is complete, a Post-Launch Confirmation letter, certifying that any problems or bugs have been thoroughly tested and fixed, will be required after migrating the site to the public server. By signing this agreement, all parties certify that subsequent fixes constitute a scope change and will require an Additional Charge form.

Risks and Assumptions

This section defines the risks and assumptions related to this project. The following list is for clarification and reference only. Please refer to the contract for additional details and specific responsibilities of each party.

Risks:
- Because of the nature of the developer/client relationship, the developer has limited access to the client server. Therefore, any server glitches that cannot be traced to the HTML code or file/path structure are the responsibility of the client and it's in-house technical team.
- Consultant is working for AMNH on a *pro bono* basis. AMNH understands that developer's obligation to other, paid client projects takes precedence over this project. Developer will try to ensure that any adverse effects on the scheduling of the AToL project are minimized and that the quality of the product is maintained.
- AMNH is responsible for obtaining or verifying copyright to any materials used on the AToL site, including images, sound files, video and text content.

Assumptions:
- This project includes concept development, design and layout, production and programming for the AToL website.
- The structure and hierarchy of the site will be based on client-provided information, with feedback and direction from Noreen Whysel when creating the site architecture.
- The client will provide all text content in electronic format on disk or via email, as well as a proofed hard copy. Production and schedule are based on receiving all content by a targeted date specified elsewhere in writing. Late delivery will directly impact budget and schedule.
- Production of the site includes creation and optimization of all files/images and HTML coding. This site contains light scripting that only includes JavaScript rollovers and drop-down navigation menus. The site will be created to exist on a UNIX or NT server and will be compliant with Netscape 5.0+ and IE 5.0+ for both Mac and PC.
- The estimated budget is based on existing information. Currently, design services are provided *pro bono*, as part of an AMNH Volunteer Agreement. Services include the creation of an HTML, flat-file site with one page per taxon. Upon receiving second round grant funding from the National Science Foundation, if it is determined that an enhanced site, including a taxon database or XML based site is required, a paid contract will be required. Once criteria and direction of an enhanced site are finalized, additional costs may apply for custom application development and other programming needs.