

**TECHNICAL ARCHITECTURE
& IMPLEMENTATION FOR
*DIGITAL MEDIA START-UP***

**PRELIMINARY ANALYSIS
& DEVELOPMENT PLAN**



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PROJECT GOAL & OBJECTIVES

The goal of this project is to create a solid technical foundation for Digital Media Start-Up to effectively operate its business. The objectives required to achieve this goal are:

- Create a Functional Specifications document encompassing functional and business requirements and including use cases and other functional component specifications that can be revised as necessary to keep company IT operations in line with related business-driven requirements.
- Create Technical Specifications and Architecture Rendering documents that address the functional specifications and a phased development plan to strategically implement the agreed-on technology in accordance with Digital Media Start-Up's time-to-market, risk-minimization, and business scaling demands.
- Create a detailed technical specification for the functional prototype (Digital Media Start-Up pre-mass-market/public release version) including a Project Plan with phased development plans, risk mitigation strategy, prototype specifications, and cost estimates and assumptions.
- Build a "wire frame prototype" or limited-functionality Web site that graphically demonstrates the Digital Media Start-Up concept and can serve as a foundation for further development.

BACKGROUND

Digital Media Start-Up, as a provider of online digital media storage and related products and services, is faced with the task of constructing a new, robust service that can meet customers' expectations in terms of reliability, availability, ease of use, and full-featured, cross-platform functionality. The technology deployed to meet or even exceed these expectations must also conform to additional criteria specific to Digital Media Start-Up's business requirements, such as total costs of development, maintenance, and ownership, as well as maximum scalability to meet increasing demand.

In addition to Digital Media Start-Up's needs for an effective IT implementation to meet numerous customer expectations and business requirements, other factors also require consideration in choosing the right IT tools for the enterprise. These factors include those related to Digital Media Start-Up's specific business environment, such as those involving digital rights management (DRM). Business risks requiring additional analysis and research in this area include the risk of divergent rights management standards being implemented by competing media conglomerates, or, alternatively, sudden industry consolidation on a single digital rights management standard that requires a specific supporting architecture, as well as potential copyright-related legal actions if acceptable DRM methods are not deployed.

Already today there are multiple competing formats with no single standard yet for key digital media technologies including DRM and streaming media and digital copyright protection, as well as increasingly litigious copyright enforcers. Digital Media Start-Up has taken the proactive step of participating in relevant industry groups such as the Open eBook Forum to help ensure business development remains in line with emerging DRM technologies and trends.

PROJECT EXECUTION PLAN

The criteria for analyzing Digital Media Start-Up's options for strategic IT implementation fall into two general categories:

1. **Functional Requirements:** Functional requirements cover Digital Media Start-Up services and supported access platforms, specified use case scenarios, and are thus broken up into discrete, unified, manageable phases for scalable, rapid development and deployment. In general, functional requirements drive the bulk of recommended technology specifications, tempered by the Business Requirements outlined below.
2. **Business Requirements:** Business requirements include industry and market factors such as the IT solutions and standards being implemented and adopted by competitors, industry heavyweights, and Digital Media Start-Up's market. Additional considerations are the ramifications of emerging legal challenges to various online digital media services and the lack of standards in the wireless content delivery arena. Also covered in this category are Digital Media Start-Up-specific factors such as costs and development and deployment options. These requirements are based largely on information provided by Digital Media Start-Up.

The first phase of this project, the analysis phase, consists of unearthing and understanding key requirements in the two complementary categories noted above. The analysis phase is thus designed to both fully define Digital Media Start-Up's functional and business requirements and provide the best IT solution to address those requirements. This phase establishes the parameters and specifications for the Digital Media Start-Up service. All research, analysis, use cases, requirements, and technical specifications in this phase shall be documented, posted for review and discussion, and submitted for Digital Media Start-Up approval at agreed-on milestone dates. The final deliverable for this phase is an analysis-based set of technical architecture specifications designed to address Digital Media Start-Up's requirements on a business-driven implementation timeline.

Based on those technical architecture specifications, we propose to develop a detailed technical specification for the functional prototype of Digital Media Start-Up, including a development plan, prototype specifications, and construction costs. Functional prototype construction costs should be within 15 percent of the actual functional prototype construction costs if constructed by us.

Once we have fully identified key functional and technical requirements of Digital Media Start-Up, we will also construct a "wire frame prototype" of the Digital Media Start-Up concept as part of this project. This will consist of a limited-functionality Web application that graphically depicts Digital Media Start-Up's functionality and service offerings.

PHASE 1-A: BUSINESS & FUNCTIONAL REQUIREMENTS ANALYSIS

Objective: Define the functional requirements for the Digital Media Start-Up service based on Digital Media Start-Up’s business objectives.

Deliverable(s): Functional requirements document

Business Analysis Tasks & Responsibilities		
PROJECT PHASE & TASKS	OUR COMPANY Activities	DIGITAL MEDIA START-UP Activities
Preparation		
Identify Digital Media Start-Up and our company project team members and additional resource issues, hold kick-off meeting, and document meeting for follow-up.	Introduce team members. Present project objectives and deliverables and discuss spheres of activity, resource allocation, and timeline issues. Coordinate project review cycles and designated representatives. Create/Distribute a follow up memo identifying the main points of meeting and any outstanding issues uncovered.	Introduce team members. Discuss and agree on project objectives and deliverables and discuss spheres of activity, resource allocation, and timeline issues. Coordinate project review cycles and designated approvers. Agree on main points outlined in document and cooperate on resolving any outstanding issues.
Business Review		
Understand Digital Media Start-Up’s market and industry and confirm relevant trends and facts impacting IT development choices.	Review competitive intelligence and market and industry research related to Digital Media Start-Up.	Provide the Digital Media Start-Up business plan, market research, industry information, and any additional materials on business background.
Understand Digital Media Start-Up’s business model, pricing model(s), supported devices, and similar business factors.	Review Digital Media Start-Up’s business model, pricing model(s), supported devices, and similar business factors and identify how these factors impact functional specifications.	Provide complete information on Digital Media Start-Up’s business model, pricing model(s), supported devices, and similar business factors.
Functional Requirements Analysis		
Document proposed Digital Media Start-Up functionality and high-level business operation requirements.	Identify, categorize and document functional requirements for Digital Media Start-Up based on company specifications and relevant industry and market factors.	Provide complete details on near- and long-term development plans as necessary.
Define the parameters and scope of integration with third parties.	Define the parameters and scope of integration with third parties such as Barnes & Noble, Amazon, etc.	Provide input and assistance as necessary.
Diagram the Digital Media Start-Up user experience, high-level use cases, and identify functional components of the service.	Create high-level description of user vision and system scope. Includes system goals, performance requirements, participants, and processes.	Provide input and assistance as necessary.
Create Glossary of Digital Media Start-Up business terms. The Glossary is key to developing and maintaining consistent, rational business application logic.	Define key business terms based on generally-accepted industry and market definitions and identify and define any terms idiomatic to Digital Media Start-Up.	Provide input and assistance as necessary.
Submit and review functional requirements document.	MILESTONE: Document outlining Digital Media Start-Up’s functional requirements.	Review and approve document outlining Digital Media Start-Up’s functional requirements.

PHASE 1-B: TECHNICAL SYSTEM ARCHITECTURE DEVELOPMENT

Objective: Create an initial technical design and architectural specification for development and implementation of the IT infrastructure to meet Digital Media Start-Up’s functional and business requirements.

Deliverable(s): System architecture and phased implementation plans

Technical Systems Architecture Development Tasks & Responsibilities		
PROJECT PHASE & TASKS	OUR COMPANY Activities	DIGITAL MEDIA START-UP Activities
System Overview		
Review Digital Media Start-Up’s business and functional requirements and synthesize into a requirements matrix. Diagram user experience and service workflow.	Create requirements matrix that can be used to analyze development options. Generate process list and identify application components and related requirements. Ascertain scale and scope of complexity. Detail key processes to be supported and components in overall architecture.	Provide input and assistance as necessary.
Review and approve system requirements matrix and workflow diagrams.	Submit requirements matrix culled from functional and business requirements and discuss prioritization. Submit and review process diagrams and component plans.	Approve requirements matrix and related diagrams and documents. Provide input and assistance as necessary.
Infrastructure Analysis		
Identify platform(s).	Document build-vs.-buy options, including available components, vendors, and service providers for options analysis.	Review Infrastructure options and decide on any development choices that impact infrastructure architecture.
Create analysis matrix for component development and deployment (hosting) options.	Maintain updated table of components with related support and service requirements.	Provide input and assistance as necessary.
Database Options		
Review and document preliminary database business logic and flow based on functional and business requirements.	Create logic flow diagram with business function descriptions.	Provide input and assistance as necessary.
Prototype data model to meet Digital Media Start-Up requirements.	Identify preliminary top-level object-relational services that drive the data model, such as transactions and persistence.	Provide input and assistance as necessary.
Document options for Digital Media Start-Up database(s).	Document options for Digital Media Start-Up database(s) based on business and functional specifications and preliminary data model.	Provide input and assistance as necessary.
Middle Tier Options		
Identify and document preliminary middle-tier requirements and components.	Create high-level logic flow diagram with business function descriptions that help define middle-tier requirements and options to meet those requirements.	Provide input and assistance as necessary.

User Interface Options		
Identify and document user interface components.	Create table outlining user interface requirements and content elements.	Provide input and assistance as necessary.
Additional Component Options		
Determine options for personalization technologies to meet previously-defined personalization requirements.	Based on personalization requirements as defined in the Functional Requirements Analysis phase, analyze and scope available options for implementing desired personalization.	Assist in updating project priorities for personalization as necessary.
Identify and define security and back-up/recovery schema and QA procedures.	Define based on available options and other market, industry, service, and architecture considerations.	Provide input and assistance as necessary.
Identify and document additional component requirements and implementation options.	Document options for additional Digital Media Start-Up technical components based on business and functional specifications in the requirements matrix.	Provide input and assistance as necessary.
Technical Risk Assessment		
Define relevant technical risks and mitigation strategies	Identify component-related risks, correlate with business/functional risks, and develop risk mitigation strategies	Provide input and assistance as necessary.
System Architecture & Approval		
Synthesize all requirements and execution options into a preliminary architecture sketch.	Coordinate with Client to schedule review sessions.	Provide input and assistance as necessary.
Review preliminary IT architecture sketch with Digital Media Start-Up.	Transform preliminary architecture sketch into detailed architecture plans, including phased implementation plans.	Review preliminary architecture sketch and work with our company on revisions as necessary.
Refine and complete architecture sketch as necessary—develop into IT architecture plans, including phased implementation plans.	MILESTONE: IT architecture and phased implementation plans.	Review final IT architecture plans and phased implementation plans and work with our company on revisions as necessary. Approve final plans.

PHASE 1-C: FUNCTIONAL APPLICATION PLAN DEVELOPMENT

Objective: Create a detailed plan for the first iteration of the functional application of Digital Media Start-Up, including architecture plans and construction cost estimates.

Deliverable(s): Functional prototype architecture and phased development plans with cost breakdowns

Functional Prototype Development Planning Tasks & Responsibilities		
PROJECT PHASE & TASKS	OUR COMPANY Activities	DIGITAL MEDIA START-UP Activities
Prototype Planning & Pricing		
Re-analyze functional requirements and architecture plans. Identify requirements and parameters of functional prototype.	Identify requirements and parameters of functional prototype.	Provide input and assistance on functional prototype requirements and parameters.
Identify relevant risk factors and address.	Risk factors should include business, technical and development risks.	Provide input and assistance as necessary.
Review and finalize plans for functional prototype	Present functional prototype plans for approval and discuss.	Review and approve prototype plans.
Price components for functional prototype (hardware, software, and other materiel costs)	Research prices for functional prototype.	Provide input and assistance as necessary.
Estimate development costs for functional prototype (construction personnel/time costs)	Estimated prices should be within plus or minus 15% of actual prices if our company builds the functional prototype.	Provide input and assistance as necessary.
Submit completed functional prototype plans and prices for review and approval.	MILESTONE: Completed functional prototype plans and price estimates.	Review and approve completed functional prototype plans.

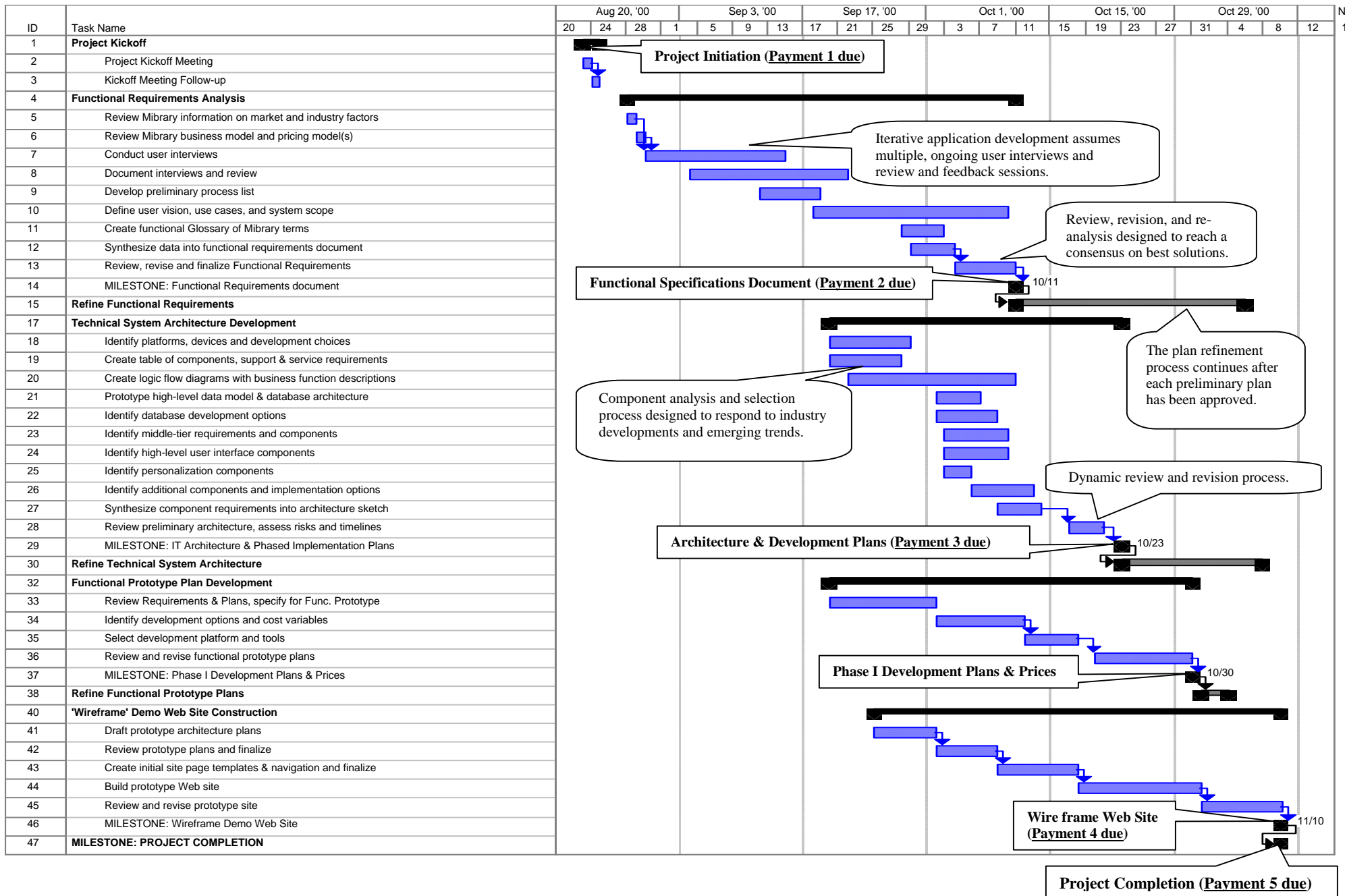
PHASE 1-D: CONSTRUCTION OF ‘WIRE FRAME PROTOTYPE’

Objective: Build a “wire frame prototype” or limited functionality Web site that graphically demonstrates the Digital Media Start-Up concept and can serve as a foundation for further development.

Deliverable(s): Digital Media Start-Up prototype Web site

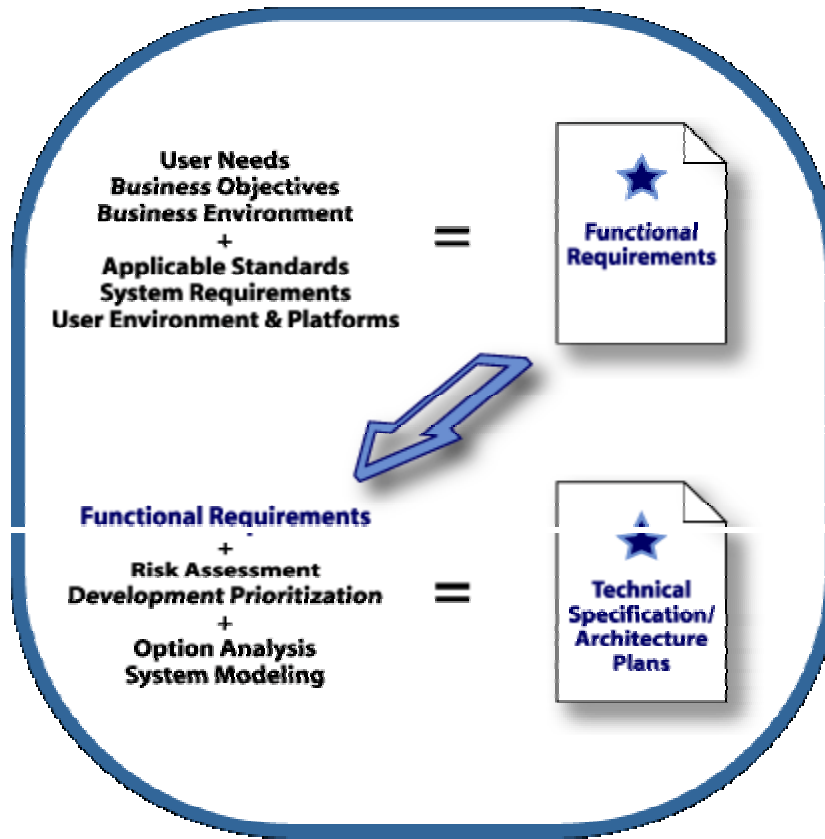
Prototype Development Tasks & Responsibilities		
PROJECT PHASE & TASKS	OUR COMPANY Activities	DIGITAL MEDIA START-UP Activities
Prototype Planning		
Create plans for prototype Web site.	Create table outlining expected Web site pages and preliminary content sources. Map into Web architecture.	Provide input and assistance on prototype site architecture, functionality, and content. Provide content for site, including text, photos, and other graphical elements.
Review prototype plans and team assignments and submit for approval.	Present prototype plans for approval and discuss.	Review prototype plans and team assignments and approve final plans.
Prototype Construction		
Create initial site page templates and navigational architecture.	Develop look-and-feel options for site templates, including navigational elements and general layout.	Select desired site look-and-feel and approve.
Meet and demo initial site page templates and navigational architecture.	MILESTONE: initial site page templates and navigational architecture.	Approve desired initial site page templates and navigational architecture.
Build prototype site.	Create Web pages with content, navigation, and interactive elements in place.	Provide input and assistance as necessary.
Submit completed prototype site for approval.	MILESTONE: Completed prototype site.	Review and approve completed prototype.

PROJECT PLAN & DEVELOPMENT TIMELINE



CONCEPTUAL DEVELOPMENT GRAPHIC

The analysis phases of your project can be depicted as follows:



PROJECT PRICE & TIMELINE ESTIMATES

- We estimate the cost for this project at \$30,000-\$50,000.*
- This project is estimated to require 10-12 weeks from date of project initiation to complete.
- **Payment Schedule:** Four payments of 22.5 percent each plus a final payment of 10 percent upon certification of successful completion are scheduled for this project.
 - Payment 1: 22.5% due at Initiation of Project
 - Payment 2: 22.5% due upon first final iteration of Functional Requirements Document
 - Payment 3: 22.5% due upon first final iteration of Architecture & Development Plans
 - Payment 4: 22.5% due upon first final iteration of Wire Frame Prototype
 - Payment 5: 10% due upon successful completion of project and final approval of all work to date.

Please refer to the project plan for more information on milestone-based payments.

* Not including travel expenses for travel outside of New York City, any applicable taxes, and any required third-party hardware, software, or eBusiness support components (digital certificates, etc.).

ASSUMPTIONS

1. The bulk of the analysis work for this project will focus on the Digital Media Start-Up customer experience, but will include preliminary requirements for back-end business operations such as accounting, inventory management, and marketing.
2. Because the main goal of this project is to create architectural plans that can be used to build the Digital Media Start-Up concept into a functional business, the involvement and availability of designated Digital Media Start-Up staff to participate in interviews, review sessions, approval cycles, and other meetings is crucial to the timely completion of the project.
3. Our company assumes the timely submission of Digital Media Start-Up's business planning documents, background research, and other available information for its review in order to aid in its rapid identification of Digital Media Start-Up's business and functional requirements.
4. Our company and Digital Media Start-Up will hold project status meetings as often as appropriate, with the expectation that weekly meetings will be appropriate. These meetings will include review of project tasks and status. Additional, less formal communication among project team members is expected to take place more frequently.
5. The Phase 2 prototype, while a subset of Phase 1 deliverables, is a distinct project requiring a new project contract and is therefore outside the scope of this document. The Phase 2 construction of the functional prototype is enabled by the completion of the project discussed herein, but that construction is not included in this project.
6. Digital Media Start-Up is currently most interested in outsourcing the technical infrastructure of the Digital Media Start-Up service to a qualified ASP.