

## What Is Multimedia?

Multimedia is many things rolled into one. What do you think of when you hear the word multimedia? Is it merely a mashup of media elements? Or is it every-thing we see, hear, read, and touch in web sites, video games, phone apps, retail kiosks, and bank ATMs? These are all forms of multimedia, and the list of uses grows daily. We are drawn into multimedia at every turn, whether we like it or not. The goal of this book is to demystify the meaning and process of creating digital multimedia.

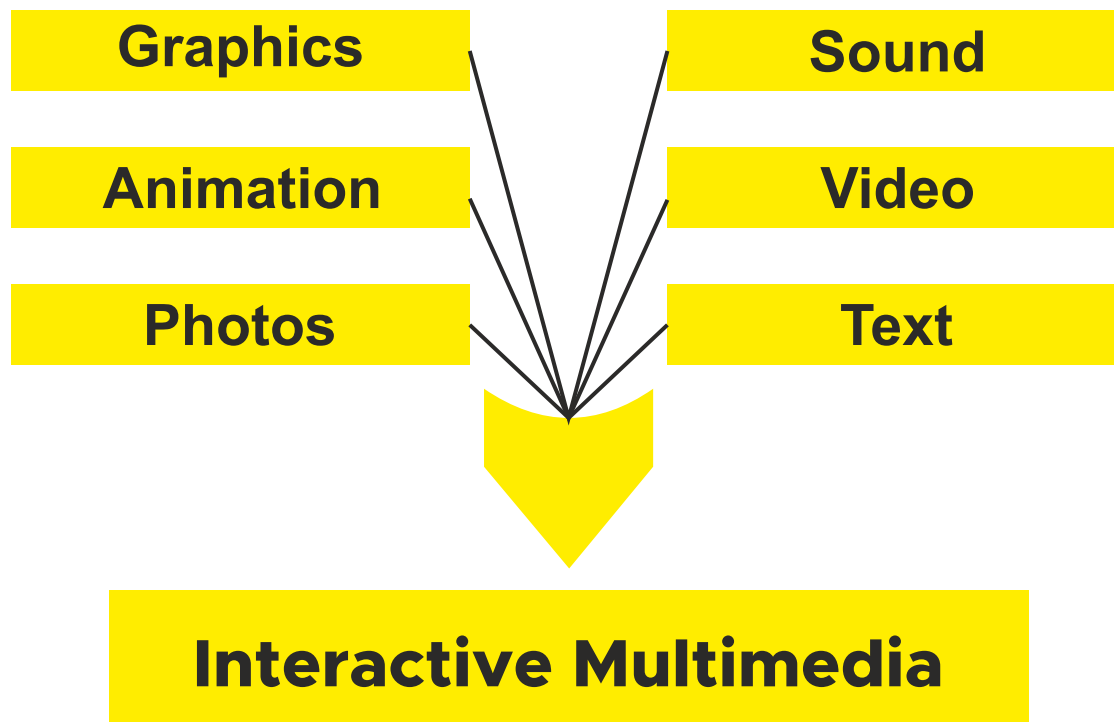
The simplest explanation of multimedia is “the combination of two or more media.” However, multimedia is vastly more complex than the term implies. It intertwines a myriad of media elements and, as a result, makes for a more comprehensive end product than when media components are experienced independently.

The media in multimedia comes in different forms: graphics, photography, text, audio (sound effects, music, voice-over, and so on), video, and animation. Individually, each one serves as a powerful communication vehicle for both expressive and practical purposes. Melded together, they allow for a more dynamic and engaging experience. The final result is improved on even further when there is cooperation and coordination between the disparate media components.

Marshall McLuhan was a leading and influential media communication theorist who coined the familiar phrase “The medium is the message” (Understanding Media: The Extensions of Man, NY, 1964). He believed that it is the “medium that shapes and controls the scale and form of human association and action.” To him, the focus should not be on the content or what is being said, but the medium by which it is delivered. The subject matter is by no means irrelevant, but the delivery format is a crucial factor in how the message comes across. This is where the immense power and influence of multimedia lie.

Media, by definition, is the plural of medium. It has evolved to mean “facilitating or linking communication” be it via a phone, the Web, TV, or some other instrument. Speaking directly with a person one on one is immediate and does not require mediation. This is communication in its purest form.

The purpose of a medium is to assist in the conveying of a message. When using more than one type of medium, we refer to it as multimedia, whether or not it is computer-based. At one time, media mainly applied to newspapers as a way to disseminate news and information to the masses. Now, media encompasses many forms of communication.



The kinds of media elements and how they are used play a significant role in multimedia environments. Consider a web site without any graphics, color, or images. How about a music video without sound? There is clearly something lacking. A combination of media adds richness and provides a complete sensory experience.

As shown in Figure multimedia is a synergistic process whereby various media elements work together to make a stronger, more cohesive whole. Take it one step further get a person involved by providing interactivity with a multimedia program, and there will be even greater potential to increase the educational and entertainment value. Adding user choices with the help of computer code leads to the interactive in interactive multimedia and generates an engaging, multifaceted experience

## History of Multimedia

Before we delve into the components and types of multimedia, let's take a look at where the term multimedia originates.

Multimedia once meant a slide projector and a tape recorder being played simultaneously. For instance, 50 years ago, photographic images in slide form were projected on a screen or wall while audio attempted to synchronize with the sequence or played as "background" music.

In 1967, pop artist Andy Warhol organized "multimedia" events called the Exploding Plastic Inevitable, where he showed films combined with live performances that were illuminated with flashing, colored lights to create a multi sensory atmosphere. The technology necessary for joining individual media did not exist at that time. Computers were not accessible to the general public and those that did exist were large, complex, costly, and primarily geared toward scientists and researchers.

Today, the term multimedia is associated almost exclusively with the computer, and the components that make up a multimedia program are digital. Various media are brought together to perform in unison on the computer as a single entity, and they are programmed or scripted using authoring software or programming languages. Diverse forms of communication are combined with multimedia to allow for a myriad of outcomes.

## Early Multimedia Computing

Up to the 1980s, mainframe computers were the norm as opposed to desktop varieties. These housed vast amounts of data and were primarily used by the military and scientific communities.

In 1975, IBM released the first portable computer with a fixed monitor, keyboard, and data storage. However, it had drawbacks: It required text input, weighed 55 pounds, and cost \$20,000, so it was hardly accessible to the masses. In the early 1980s, IBM introduced desktop computers, or personal computers (PCs). The base model had no built-in storage and a text-based screen where input was limited to typing on a keyboard.

As the PC developed, so did its multimedia capabilities. This allowed for regular and widespread use of multimedia and the creation of media elements. At this time, people began using computers for many home and office purposes.

In 1983, Apple Computer, Inc., announced its first desktop computer, which demonstrated an innovative graphical user interface (GUI). It was called the Lisa, and was considered user-friendly because it included a mouse to point and click on interface/screen desktop elements. Other PCs, such as the IBM, did not have these capabilities at the time.

The Lisa was ultimately not successful, so in 1984, Apple released the Macintosh. This was the first commercially successful computer with a GUI that was capable of designing for desktop publishing. This early Mac paved the way for the creation of graphics and page layout design with What You See Is What You Get (WYSIWYG) technology. This allowed the users to view on their screen an approximate representation of what they would have in their printout, so it was possible to make edits and not need to guess what the final output would look like.

Shows the timeline from the early days of PCs to the current multimedia computers.



### Timeline of early days of PCs that led to Multimedia Computers

Year	Technology and Functionality
1975–1979	First portable computers and game systems; text input only
1980–1987	First personal computers for word processing, spreadsheets, games, simple slide shows; basic interactivity; CD-ROM specification for releasing multimedia titles; better monitors with higher quality color graphics; increased storage
1988–1992	Faster processors and more memory; sophisticated GUIs; interactive environments grow; beginning of the World Wide Web (the Web) with HTML
1993–2000	CD-quality audio and wide use of CDs and DVDs for data storage; 3D computer animation and virtual reality; enhanced presentation software; sophisticated authoring environments; cross-platform developments; the Web becomes interactive with GUIs; widespread Internet and web access
2001–2011	Extensive Internet use with broadband Ethernet capabilities; all-in-one handheld devices for email, Internet, phone, music, video, and photos; game systems and smart phones with Wi-Fi and 3G access; vast search capabilities (such as Google); real-time videoconferencing and live news broadcasts; video on demand (Netflix, Hulu); TV recording devices; social networking; rich multimedia presentations; high-definition TV with Blu-ray technology; downloadable music (iTunes, Pandora)

## 37th GST Council Meeting Highlights

37th GST Council meeting was held on the 20th of September in Goa. Smt. Nirmala Sitharaman, the Union Finance Minister, chaired this Council meeting. Take a look at the highlights of the meeting..

### Decisions at 37th GST council meeting

The meeting concluded with several decisions ranging from relaxations in annual return filing, rate revisions, deferment of new GST returns, changes to composition scheme, new GST exemptions and some clarifications detailed as follows:

#### 1. Waiver of GSTR-9A for Composition Taxpayers for FY 2017-18 & FY 2018-19

Composition dealers have been granted exemption from filing of annual returns in GSTR-9A for the fiscal years 2017-18 and 2018-19. In the future, it is mostly expected to be done away since the form GSTR-4 has been tweaked to allow an annual declaration of turnover and tax details.

#### 2. GSTR-9 for small taxpayers now not compulsory for FY 2017-18 & FY 2018-19

Those taxpayers having an annual turnover of up to Rs 2 crore in FY 2017-18 or FY 2018-19, may choose to not file GSTR-9, from the date to be notified by CBIC. GST Council has also decided to review the simplification of GSTR-9, 9A and 9C forms and filing. However, they must continue to file annual returns for FY 2019-2020 onwards. Large taxpayers should continue to comply and close annual return filing both in GSTR-9 and GSTR-9C by 30 November 2019.

#### 3. New GST Returns Deferred to April 2020

The new GST return system will now be implemented from April 2020. This decision is appreciated as several transitional issues that could crop up while implementing in the middle of the year, can now be avoided. Taxpayers can begin on a fresh note from a new financial year. It must be noted that the decision to defer applies to all taxpayers and for all forms under the new GST returns system.

#### 4. Restrictions on ITC claim in GSTR-3B

To push the timely filing of a statement of outward supplies by taxpayers, the GST Council recommended restrictions on Input Tax Credit (ITC) claim. ITC will be restricted for the recipients if the suppliers have not furnished the details of outward supplies.

#### 5. Circular on Post Sale Discount Withdrawn

CBIC released Central Tax Circular number 105, dated 28 June 2019. Through the circular, they have clarified post-sale discount for promotional activities by the dealer, secondary discounts, and reversal of ITC on post-sale discount.

The circular clarifies that whether the post-sale discount has to be included in the value of supply or not and whether ITC is to be reversed at the time of issuing a credit note or not in certain specified cases.

The GST Council recommended revoking of the circular number 105 with retrospective effect from the beginning (abinitio).

#### 6. GST Exemptions announced

- Supplies of goods or services to FIFA- specified individuals for the Under-17 Women's Football World Cup in India.
- Supply to the Food and Agriculture Organisation (FAO) for specified projects in India.
- Imports of certain defence goods not made indigenously (up to 2024).
- Import of silver/platinum by specified agencies (Diamond India Ltd), and the supply of silver/platinum by specified nominated agencies to exporters for the export of jewellery.
- Storage or warehousing services for cereals, pulses, fruits, nuts and vegetables, spices, copra, sugarcane, jaggery, raw vegetable fibres such as cotton, flax, jute etc., indigo, unmanufactured tobacco, betel leaves, tendu leaves, rice, coffee and tea.
- Life insurance business provided or agreed to be provided by the Central Armed Paramilitary Forces (under Ministry of Home Affairs) Group Insurance Funds to their members.
- Services provided by an intermediary to a supplier of goods or recipient of goods when both the supplier and recipient are located outside the taxable territory.
- The BANGLA SHASYA BIMA (BSB) crop insurance scheme of the West Bengal Government.

#### 7. Other Significant Decisions

- The validity period of the conditional GST exemption extended for export freight by air or sea by one more year till 30 September 2020.
- Taxability of fishmeal: Exemption granted for all cases from 1 July 2017 to 30 September 2019, except where tax is already collected.
- Pulleys, wheels and items under HSN 8483 used as agricultural machinery to be taxed at 12% during period 1 July 2017 to 31 December 2018.
- Option to pay GST at the rate of 18% on transaction value at the time of disposal of specified goods for petroleum operations (on which concessional GST rate of 5% was paid at the time of original supply) provided that the goods are certified by Director General Hydrocarbon (DGH) as non-serviceable.
- To specify modalities for allowing concessions on spare parts imported temporarily by foreign airlines for the repair of their aircraft, while in India in transit in terms of the Chicago Convention on Civil Aviation.

#### List of GST Rate changes

Here is a list of principle rate revisions passed by GST Council

#### GST Rate Revision effective from 1 October 2019

Item	Current Rate	New Rate
Plates and cups made of flowers, leaves and bark	5%	Nil
Caffeinated Beverages	18%	28%+12% cess
Supplies of Railways wagons & coaches (without refund of accumulated ITC)	5%	12%
Outdoor Catering (without ITC)	18%	5%
Diamond Job work	5%	1.50%
Other Job work	18%	12%
Hotels (Room Tariff of Rs.7501 or above)	28%	18%
Hotels (Room Tariff from Rs 1,001 to Rs 7,500)	18%	12%
Woven/ Non-woven Polyethylene Packaging bags	18%	12%
Marine fuel	18%	5%
Almond Milk		18%
Slide fasteners	18%	12%
Wet grinders (consisting of stone as a grinder)	12%	5%
Dried Tamarind	5%	nil
Semi-precious stones- cut & polished	3%	0.25%
Specified goods for petroleum operation under HELP*	Applicable Rate	5%

Item	Current Rate	New Rate
Cess on Petrol Motor Vehicles (Capacity of 10-13 passengers)	15%	1%
Cess on Diesel Motor Vehicles (Capacity of 10-13 passengers)	15%	3%

## Expectations from the GST Council meet

## 1.Simplification of GSTR-9

The original due date of GSTR-9/9A/9C was on the 31st of December 2018. This has been extended four times and the latest due date is 30th November 2019. Only 15% of taxpayers had filed their annual return when the third extension of due date took place.

Taxpayers and professionals are facing hardship while reporting HSN summary of purchases, Input Tax Credit (ITC) bifurcation between goods and services, ITC breakup for expenses and while reconciling with Books of Accounts to mention a few.

The compliance level of GSTR-3B was found to be almost double when compared with GSTR-1. This proves that people are looking for a simplified return like GSTR-3B, which is a summary return.

Businesses are hoping that the government focuses more on the simplification of GSTR-9 rather than providing for an extension of the due date. The government may in the upcoming Council meeting consider removing certain disclosure requirements less significant. Alternatively, it may replace an existing return with a summarised return, which can be easily understood by a taxpayer. It is also expected that the Council may take a decision on providing an exemption to small taxpayers for the annual return compliance requirement for FY 2017-18.

## 2. Implementation of New Return Filing System Can Be Deferred

The new return filing system is going to be implemented from October 2019. The government provided the prototype returns and they are in a view that the taxpayers and professionals can get a look and feel of how the new return system works under the new return system. But under these prototype returns, all the features are not enabled.

The new return filing system requires reporting of additional information when compared to the present system. The taxpayers need sufficient time to adopt a proper book-keeping and invoice management system which fulfils their disclosure requirements under the new system. The Council may take a decision on deferment of the new return system for smooth implementation.

The GST network also recommended for the launch of the simplified new GST returns system from January 2020. The GST Council may also look into the proposal of two deadlines for small and large taxpayers under new simplified GST returns.

### 3. Council to Focus on the GST Rate Cuts Concerning the Auto Sector

The auto industry is demanding for a GST rate cut to 18% from the current GST rate of 28%. The Finance Minister has assured that the government is aware of the troubles in the auto sector. FM also added that the concerns related to the automobile industry will be taken up in the upcoming Council meeting.

In the previous GST Council meeting, the GST rates on electric vehicles were reduced from 12% to 5%. A conclusive decision around GST rate cuts with regards to the auto industry is expected to happen in the next Council meeting.

#### 4. Council may Look at the ITC Treatment in the Healthcare Sector

Several hospitals have claimed that their yearly profit margins have gone down by around 8% since there is no Input Tax Credit (ITC) benefit. Currently, except for cosmetic surgeries, implants, and hair transplant, all other health care services are exempt from GST charges.

Since ITC cannot be claimed on them, the cost of inward supplies is increasing. Hence, the healthcare service providers are now urging for an output GST of 5% on such taxable services without ITC. It is most likely that the Council will take this discussion further in the upcoming GST Council meeting

## 5. Council is Likely to Review the Present Revenue Position

With an aim to increase the revenue collection, the Council is likely to initiate additional steps to bring down tax evasion. In comparison to the GST revenue collections made in June (Rs 0.99 lakh crore), there has been a slight increase in the collections made in July (Rs 1.02 lakh crore). Also, the revenue collections for July are higher in comparison to the average monthly revenue collection in the previous financial year.

However, the collections made until now have not been sufficient enough to meet the yearly targets. According to the Union Budget 2019-20, the government brought down the GST revenue collection targets to Rs 6.63 lakh crore versus the previous target of Rs 7.61 lakh crore that were mentioned in the Interim Budget 2019-20.

## 6. Other Expected Decisions

The GST rate cut or rate structure modification has to be approved by Fitment Panel before placing for the decision in GST Council. The GST council may take the decision on rate cut or rate structure modification with respect to the list given below

1. Five-star hotels
2. Outdoor catering
3. Match sticks, Cups & Plates
4. Lotteries
5. Biscuits

## OUR PRIDE

