VU Online Communication and Marketing – Day 1, WS 2017/18

Ass.-Prof. Dr. Anna Fensel

06.12.2017

Agenda

Formalities:
• Course overview
• VU organization

In this VU – day 1:
1. Motivation
2. Multi-channel Publishing / Dissemination
3. Social Media Monitoring
4. Communication
5. The Semantic Communication Engine Innsbruck (SCEI)
6. Added Value in eTourism
What will you learn in this course?

- Multi-channel publication/distribution (dissemination), social media monitoring, communication, customer retention (engagement), semantic engagement.
- Tools for online communication in theory, as well as their use these in practice.
- Small, hands-on online communications and marketing projects and exercises.

Also:
- Presentation skills
- Working in teams

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Course Leaders

Ass.-Prof. Dr. Anna Fensel
Boran Balci, Msc.
Mag. Oleksandra Panasiuk
Dipl.-Ing. Alexander Wahler

and invited practitioners:
Eva-Maria Hänel (Speed U Up),
Tobias Freund (Toocan),
& ONLIM team

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Department of Computer Science
University of Innsbruck
Technikerstr. 21a
6020 Innsbruck, Austria
Office hours: by appointment.

Assignment

• Language: German and English

• Course exercises
  – Such as marketing for your own / example hotel or another
    service provider: from use case definition to campaign
    planning, to implementation and campaign monitoring

• Practical work at the seminars
• Reporting for each module to the module leader

• Grade requirements: successful participation assessment
  – work and presentations at VU, completed exercises
• VU attendance is mandatory
### Course Modules - Overview

<table>
<thead>
<tr>
<th>Session / Day</th>
<th>Topic</th>
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</table>
| 1 / 06.12.2017 | **Introduction**  
introduction to online communication and marketing, social media channels overview |
web technology & semantic annotations |
| 3 / 10.01.2018 | **Dissemination and Communication**  
social media strategy and planning, analytics |
| 4 / 17.01.2018 | **Listening and Hearing**  
(social) media monitoring |
| 5 / 24.01.2018 | **Advanced Tools**  
multi-channel automated publishing & interaction, content marketing, chatbots |

### Administrative issues - References

- **Course in webpage:** [https://www.sti-innsbruck.at/teaching/course-schedule/ws-201718/online-kommunikation-und-marketing-ws-20172018](https://www.sti-innsbruck.at/teaching/course-schedule/ws-201718/online-kommunikation-und-marketing-ws-20172018)
  - Slides and other materials are appearing there as they are presented at the lecture

- **Exercise submissions:** as asked by the course instructor
  - A number of exercises will be in teams (3-5 people)

- **Timing of the day**
  - 09.00-10.30
  - 10.45-12.15
  - 12.45-14.15
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The Crazy Hotelier

The Hotelier of today has to deal with many different communication channels:
The Crazy Hotelier

The Hotelier of today has to deal with many different communication channels:
- walk-in customer
- telephone

HOTEL RECEPTION
The Hotelier of today has to deal with many different communication channels:
- walk-in customer
- telephone
- email
- fax
The Hotelier of today has to deal with many different communication channels:
- walk-in customer
- telephone
- email
- fax
- hotel website
- review sites
The Hotelier of today has to deal with many different communication channels:
- walk-in customer
- telephone
- email
- fax
- hotel website
- review sites
- booking sites
- social network sites
The Hotelier of today has to deal with many different communication channels:

- walk-in customer
- telephone
- email
- fax
- hotel website
- review sites
- booking sites
- social network sites
- blogs
- fora & destination sites
The Crazy Hotelier

The Hotelier of today has to deal with many different communication channels:
- walk-in customer
- telephone
- email
- fax
- hotel website
- review sites
- booking sites
- social network sites
- blogs
- fora & destination sites
- chat
- video & photo sharing
The Crazy Hotelier

The Hotelier doesn't only have to deal with an overwhelming number of communication channels, but also has to pay up to 15% sales commissions to the booking sites!

-> 80 million overnight stays
-> 4 billion € transaction volume
-> 101 million € sales commission
Scalable Multi Channel Communication:

- Enable more precise targeting and optimized product positioning
- Reduce the amount of work required for filling out and observing the various communication channels
- Reach the greatest possible target audience with the smallest possible effort

http://www.youtube.com/watch?feature=player_embedded&v=rA0wdkPB7gA
Visibility:

- Increase the quality of visibility
- Increase the degree of visibility
- Increase the number of direct bookings by increasing the traffic on the hotel website

Credibility:

- Increase the believability of sources and messages
- Increase the trustworthiness of sources and messages
Major Issues

Easy Booking:

- Offer booking possibilities through the various communication channels
- Increase the transparency of offers and pricing

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What is Dissemination?

- The vital importance of receiving, synthesizing and communicating online information is increasing dramatically in our current digital age.

- **Dissemination** (from the Latin *dissēminātus* = “sowing seeds”, “scatter wildly in every direction”) refers to the process of broadcasting a message to the public without direct feedback from the audience.

- Takes on the view of the traditional view of communication which involves a sender and a receiver.

- The message carrier sends out information to many in a broadcasting system (composed of more than one channels).

- Harmsworth et al. (2000) define dissemination as the “delivering and receiving of a message”, “the engagement of an individual in a process” and “the transfer of a process or product”.

What is a dissemination channel?

- “In telecommunications and computer networking, a communication channel, or channel, refers either to a physical transmission medium such as a wire, or to a logical connection over a multiplexed medium such as a radio channel.” (Wikipedia Channel (communications), 2012)

- A channel is a means of exchanging information in the on-line space; a “place” where one can find or leave information, whether it is unanimously referred by a URI or addressed through a service.

Why Do It?

Purpose of Dissemination

- **Dissemination for Awareness**
  - You wish people to be aware of the work of the project
  - Useful for those target audiences that do not require a detailed knowledge of the work and is helpful for them to be aware of your activities and results
  - Will help the “word of mouth” type dissemination and help the organizer build an identity and profile within the community

- **Dissemination for Understanding**
  - It is aimed at a specific number of groups/audiences that need to be targeted directly
  - Target audience that benefits from what your project has to offer and have a deeper understanding of the project’s work

- **Dissemination for Action**
  - “Action” = change of practice resulting from the adoption of products, materials or approaches offered by the project
  - Target audience: people that are in the position to “influence” and “bring about change” within their organizations (have skills, knowledge and understanding of your work)

Source: [http://www.northampton.ac.uk/its/35967/pedagogic-research-and-scholarship/1068/dissemination](http://www.northampton.ac.uk/its/35967/pedagogic-research-and-scholarship/1068/dissemination)
Channels

Classified by the type of service they provide:

- Static Broadcasting
- Dynamic Broadcasting
- Sharing
- Collaboration
- Social Networks
- Internet Forums and Discussion Boards
- Online Discussion Groups
- Semantic-based Dissemination
- Overview of Channels

Static Broadcasting

- Prehistoric methods of dissemination: cave drawings, stories of triumphs on columns and arches, history on pyramids, stones with messages
- More modern means: printed press, newspapers, journals
- Online static dissemination: websites and homepages….
Static Broadcasting

Online Broadcasting – Static Websites

Homepages / Static Websites

• Powerful tool for reaching the target audience and promoting the project

• Primarily used to provide information about the project and news of its activities and outcomes.

• There is the temptation to present the information in order to “wow” the visitor

• BUT! users tend to prefer good content in a simple, clear and easy-to-navigate interface (Keep It Simple, Stupid!)

• Although created through a collaborative process, Wiki websites can be considered static forms of online broadcasting as the information contained in them remains the same for long periods of time (i.e. the collaboration process is mostly employed for adding new data or editing/correcting existing one).

• Wikipedia is an equally important channel that should be mentioned (although articles are created through a collaborative process)

The same hotel mentioned on Wikitravel’s entry for Innsbruck

Static Website Example

Homepage Example
**Static Broadcasting**

Static Website Example

Entry in Wikipedia for Hotel Goldener Adler

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**Dynamic Broadcasting**

- Small piece of content that is dependent upon constraints such as time and location.
- With Web 2.0 technologies have created dedicated means for publishing streams and interacting with content generated by users.
- **Blogs**: pages where people present their ideas, views and opinions on a particular subject
- **News**: pages where facts or factual information is provided
- **BUT**: Producing high-quality content for a blog on a regularly basis is time-consuming and costly
Dynamic Broadcasting

Good practices:

• Each **new item** has its **own URL** (in order to be bookmarked, shared, returned in search results, etc.)
• Should contain a **pointer** to a **more detailed description** about the information items described;
• Each new item is **archived**
• Each new item can be **indexed** by search engines
• Each new item is **types** (through the use of the information model)
• Each new item is **categorized** (using folksonomy)
• Each post can be directly **shared**, liked, added to **favorites**.
• News can be **searched** for, **sorted** and **filtered**
• Important news items stay at the top to **highlight** main announcements


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Dynamic Broadcasting

Channels/Tools – An overview

• **Examples of tools** (organized considering first the length of message and second – the level of interactivity):
  - News Feeds
  - Newsletters
  - Email / Email lists
  - Microblogs
  - Blogs
  - Social networks
  - Chat and instant messaging applications
Dynamic Broadcasting

News Feeds

• RSS (Rich Site Summary) Feeds:
  – a family of web feed formats used to deliver regularly changing web content.
  – Many websites and blogs offer users the option of subscribing to their RSS feed.
  – The content is syndicated automatically – the user does not have to visit each website manually.
  – RSS Readers are available for different platforms:
    • PC readers: Amphetadesk, FeedReader, NewsGator, Thunderbird
    • Web-based readers: My Yahoo, Bloglines, Google Reader
  – Includes full or summarized text, plus metadata (publishing dates and authorship).

<xml version="1.0" encoding="UTF-8"/>
<rss version="2.0">
  <channel>
    <title>RSS Title</title>
    <description>This is an example of an RSS feed</description>
    <link>http://www.someexamplerssdomain.com/main.html</link>
    <lastBuildDate>Mon, 06 Sep 2010 00:01:00 +0000</lastBuildDate>
    <pubDate>Mon, 06 Sep 2009 16:45:00 +0000</pubDate>
    <ttl>1800</ttl>
    <item>
      <title>Example entry</title>
      <description>Here is some text containing an interesting description.</description>
      <link>http://www.wikipedia.org</link>
      <guid>unique string per item</guid>
      <pubDate>Mon, 06 Sep 2009 16:45:00 +0000</pubDate>
    </item>
  </channel>
</rss>
Newsletters

- The newsletter is an instrument used to regularly exchange information among the members of a community.

- It constitutes the primary means of collecting and spreading the results achieved through network activities.

- The main objectives of the Newsletter are:
  - to report the main activities promoted and undertaken
  - to widely disseminate information about published papers (position papers, state of the art reviews) of researchers involved in the network.

- Website users have the possibility to subscribe to the Newsletter and automatically receive each issue in their mailbox.

- Users should have the option of subscribing and unsubscribing.

Bad example:

- Lot of colors
- Big images
- 2+ columns
- Too much info
- Small fonts
Dynamic Broadcasting

Good example:

- Clear
- Well structured
- Not too much text
- Not too much images
- Not too much color

Email/Email lists

- **Email**: means of exchanging digital messages from a sender to one or multiple recipients

- **(Electronic) Mailing lists**: collection of names and (email) addresses used to send material to multiple recipients.
  - Announcement lists (Newsletters, periodicals, advertising – used primarily as a one-way conduit of information and can be “posted to” by selected people) vs. **Discussion lists** (any subscriber can post)
  - Can be self-hosted (e.g. GNU Mailman) or third-party hosted (as part of notifications for Google groups, Yahoo! Groups)
  - Requires users to subscribe to the list.
Dynamic Broadcasting

Email/Email lists

- Well established means for dissemination within a predetermined group
- Requires members to subscribe to a mailing list
- Since email lists are mostly not accessible to a wider audience, they should be ignored for external use and focus should be primarily on external means of communication
- Email is a good method of sharing information on a one-to-one basis (e.g. mail this website to a friend)
- Despite their obvious strength, in the age of information overload and spam, mailing lists will not perform efficiently if they are not carefully targeted and offer recipients the option to subscribe/unsubscribe whenever they wish.
- Note!: there are legal requirements associated with the possibility to subscribe/unsubscribe and the storage of and access to personal data [European Commission, n.d.]

Dynamic Broadcasting

Microblogging

- Broadcast medium similar to blogs
- The difference between microblogging and an actual blog is in the size of the content in both actual and aggregate files.
- The actual messages are called microposts.
- Commercial microblogs exist to promote websites, services, products or collaboration within an organization.
- Can contain a wide range of topics.
- Low effort to participate.
Dynamic Broadcasting

Microblogging

- **Twitter**
  - Social networking service and microblogging service
  - Users can send messages of a maximum length of 140 characters, follow other users, and create interest lists.
  - Widely used means of dissemination
  - Significant space limitations: 140 characters or less
  - Tweets are publicly visible by default (senders can restrict the access control)
  - Users can tweet using the website, apps, external APIs or SMS
  - The service is free
  - Users may subscribe to other users' tweets — this is known as following and subscribers are known as followers or tweeps

![Twitter logo]
Dynamic Broadcasting

Microblogging

- Tumblr
  - Tumblr is a microblogging platform and social networking website.
  - It is owned and operated by Tumblr, Inc.
  - It allows users to post multimedia and other content to a short-form blog, named a "tumblelog".
  - Users can follow other users' blogs, as well as make their blogs private.

![Tumblr](https://www.tumblr.com/explore/trending, 9/24/2015)

![Tumblr](http://tonystark.tumblr.com/, 9/24/2015)

![Tumblr](https://www.tumblr.com/tagged/tirol, 9/24/2015)
Dynamic Broadcasting

Microblogging

- **Instagram**
  - Instagram is a mobile photo sharing, video sharing and social networking service
  - It is owned and operated by Facebook
  - It allows users to post images and videos and modify those contents with filters
  - Users can follow other users profiles, as well as make their profiles private
  - Instagram supports image search by hash tag
    e.g.: #lecture #landeck #socialmedia #unirocks

Dynamic Broadcasting

Blogs

- Alternatively called web logs or weblogs
- A weblog is a hierarchy of text, images, media objects and data, arranged chronologically, that can be viewed in an HTML browser.
- In some situations, it is the creator’s online journal.
- The activity of updating a blog is “blogging” and someone who keeps a blog is a “blogger.”
- Items are posted on a regular basis and displayed in reverse chronological order.
- Individual articles on a blog are called “blog posts,” “posts” or “entries”.
- Blogs are usually (but not always) written by one person and are updated pretty regularly.
- Blogs are often (but not always) written on a particular topic.
Dynamic Broadcasting

**Blogger / Blogspot**

- Hosted (www.sti-innsbruck.at)
- Or installation on own server

**Wordpress**

- Hosted (mysite.wordpress.com)
- Or installation on own server

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Welcome to WordPress!

We’ve provided you with some links to get you started:

- Customize Your Site
  - Add and remove pages
  - View your home page
- Learn more about getting started
Dynamic Broadcasting

Using Social Networks

- Social network content is dynamic in the sense that it provides information that will expire after a period of time and be important only for that period and moment;
- However, as it focuses more on creating communities than on the temporal and geospatial aspect of the information, it will be discussed in detail in Section “Social Networks”.

Chat Applications

- one-to-one basis
- Instant method of communication
- Text-based chat, video chat, one vs. multiple receivers, web-based etc.
- Can be applied to a small number of people (it does not scale well for large groups – it is impossible to follow who is discussion when more than one member of the discussion group is writing/typing simultaneously)
- It is not useful as a method of dissemination due to its instant and intrusive nature
- In order to be used as a dissemination method, the user must add the message sender to the contact list
Sharing

- There are a large number of Web 2.0 websites that support the sharing of information items such as: bookmarks, images, slides, and videos, etc.

- Provided by hosting services (images, videos, slides are stored on a server)

Sharing

- Can use specialized applications (see below) of features of other platforms and services (e.g. share photos through Facebook)

- Examples:
  - Flickr – as a means of exchanging photos, visible to all users (no account necessary), allows users to post comments;
  - Slideshare – channel for storing and exchanging presentations;
  - YouTube and VideoLectures – sharing videos, all users can see the posted videos and leave comments on the websites
  - Social Bookmark sites: e.g. delicious, digg, StumbleUpon, Pinterest
  - Social News websites: e.g. reddit
Sharing

Slide Sharing
slidesshare

- Launched in 2006
- Is a Web 2.0 based slide hosting service
- Users can upload files privately or publicly as: PowerPoint, PDF, Keynote or OpenOffice presentations
- Slide decks can then be viewed on the site itself, on hand held devices or embedded on other sites
- SlideShare also provides users the ability to rate, comment on, and share the uploaded content
Picture Sharing

flickr

• Launched in 2004, and acquired by Yahoo! in 2005
• Image and video hosting website, web services suite and online community
• It is a popular website for users to share and embed personal photographs
• It is a service widely used by bloggers to host images that they embed in blogs and social media
• features:
  – accounts, groups and access control
  – organization (based on tags added on the pictures),
  – organizer (web application for organizing photos within an account that can be accessed through the Flikr interface),
  – picnik (default photo editor in a partnership with Picnik online photo-editing application),
  – interaction and compatibility with other applications (e.g. RSS and Atom feeds)
  – filtering (lets members specify by default what types of images they generally upload and how “safe” the images are),
  – licensing, map sources (geographic locations), account-undelete option (reverse an account reminnation)
Sharing

Video Sharing

YouTube

- Video-sharing website where users can upload, view and share videos
- Features
  - Video technology: Playback (re-watch a video), Uploading (up to 15 min), Quality and codecs and 3D videos
  - Content accessibility - view videos on web pages outside the site
  - Localization - adaptability to different languages, regional differences and technical requirements

Video Sharing

Videolectures

- Launched in 2007
- Videolectures.NET is a free and open access educational video lectures repository.
- The lectures are given by distinguished scholars and scientists at the most important and prominent events such as conferences, summer schools, workshops and science promotional events from many scientific fields.
- The portal is aimed at promoting science, exchanging ideas and fostering knowledge sharing by providing high quality, didactic contents not only to the scientific community but also to the general public.
- All lectures, accompanying documents, information and links are systematically selected and classified through the editorial process whilst taking into account users' comments.
Sharing

Social Bookmarking

- Is a method for Internet users to organize, store, manage and search for bookmarks of resources online.

- Descriptions may be added to these bookmarks in the form of metadata, so users may understand the content of the resource without first needing to download it for themselves.

- The resources themselves aren’t shared, merely bookmarks that reference them.

- Social bookmarking is particularly useful when collecting a set of resources that are to be shared with others.

- Anyone can participate in social bookmarking.
**Social Bookmarking**

**delicious**

- Founded in 2003
- Is a social bookmarking web service for storing, sharing, and discovering web bookmarks.
- Characterized by a non-hierarchical classification system in which users can tag each of their bookmarks with the desired index terms (which generates a kind of folksonomy)
- A combined view of everyone's bookmarks with a given tag is available;
- The most important links or popular ones can be seen on the home page, "popular" and "recent" pages
- All bookmarks are publicly viewable by default - the public aspect is emphasized the site is not focused on storing private bookmark collections
- But users have the ability to mark some as private and imported ones are private by default
Sharing

Social Bookmarking

digg

- Launched in 2004
- User-driven social content website
- After a user submits content, other users read their submission and "Digg" what they like best
- Allows users to vote stories up or down (called digging and burying, respectively)
- If a story receives enough Digs, it is promoted to the first page

Social Bookmarking

StumbleUpon

- Launched in 2001
- Is a discovery engine that finds and recommends web content to its users
- StumbleUpon uses collaborative filtering (an automated process combining human opinions with machine learning of personal preference) to create virtual communities of like-minded Web surfers.
- Rating Web sites update a personal profile (a blog-style record of rated sites) and generate peer networks of Web surfers linked by common interest.
- These social networks coordinate the distribution of Web content, so that users "stumble upon" pages explicitly recommended by friends and peers.
- Giving a site a thumbs up results in the site being placed under the user's "favorites".
Sharing

Social Bookmarking

reddit

- Is a social news website where the registered users submit content, in the form of either a link or a text "self" post.
- Other users then vote the submission "up" or "down," which is used to rank the post and determine its position on the site’s pages and front page.
- In December 2011, Reddit served just over 2 billion page views to almost 35 million visitors *


Social bookmarking

- Pinterest
  - Pinterest is a more a “catalog of ideas” than a social network
  - It is owned and operated by Pinterest
  - Users define fields of interest
  - Users can pin interesting contents to different boards
  - Boards can be public or secret
  - Invite and follow friends
  - Users can pin websites
  - Or upload pictures
Sharing

All figures taken from: http://w3techs.com/technologies/compatibility/sosharingwidgets,so-diggingwidgets,so-diggwidgets,so-pinterest, 9/29/2015

W3Techs.com, 29 September 2015

- absolute usage percentage  ■ market share

Percentages of websites using various social widgets

Pinterest  X  2.2%  8.0%
Digg  X  0.4%  1.4%
Delicious  X  0.4%  1.4%
Sharing

How to read the diagram:
Pinterest is used by 8.0% of all the websites whose social widget we know.
Pinterest is used by 8.1% of all the websites whose social widget we know and that rank in the top 1,000,000.

![Diagram showing percentages of websites using social widgets](http://w3techs.com/technologies/comparison/so-deliciouswidgets,so-diggwidgets,so-pinterest)

All figures taken from: http://w3techs.com/technologies/comparison/so-deliciouswidgets,so-diggwidgets,so-pinterest, 9/29/2015

Sharing

Market position, selected social widgets, 29 Sep 2015, w3Techs.com

![Diagram showing market position of social widgets](http://w3techs.com/technologies/comparison/so-deliciouswidgets,so-diggwidgets,so-pinterest)

All figures taken from: http://w3techs.com/technologies/comparison/so-deliciouswidgets,so-diggwidgets,so-pinterest, 9/29/2015
Collaboration

Wiki

- "Wiki" = Hawaiian word for "fast" of "quick".
- Described by the developer of the first wiki software, Ward Cunningham, as the "simplest online database that could possibly work."
- Websites whose users can add, modify or delete content via a web browser using simplified markup language or a rich-text editor.
- Are powered by wiki software.
- Most of the content is created collaboratively.
- Promotes meaningful topic associations between different pages by making link creation intuitively easy and showing whether an intended page exists or not.
- It seeks to involve the visitor in an ongoing process of creation and collaboration that constantly changes the Web site landscape.
- However – once created the information remains static until another user edits or deletes it.


Example Wiki

Biggest online free encyclopedia
Collaboration

Google Docs

- Is a free, Web-based office suite and data storage service
- It allows users to create and edit documents online while collaborating in real-time with other users.
- Google Docs combines the features of Writely and Spreadsheets with a presentation program incorporating technology designed by Tonic Systems.
- Data storage of files up to 1 GB total in size was introduced on January 13, 2010, but has since been increased to 15 GB, documents using Google Docs native formats do not count towards this quota.
- Its main features rely on storage, file limits, and supported file formats

Collaboration

Ether Pad

- Launched in 2008
- EtherPad web service allows real-time document collaboration for groups and teams.
- Etherpad can be re-branded with your own domain and company name.
- Acquired by Google – the servers are down
Collaboration

Evernote

- Launched in 2007 in California
- Multi-platform app for:
  - note taking
  - organizing
  - Archiving
- Supported OS
  - Microsoft Windows
  - OS X
  - Android
  - BlackBerry OS
  - iOS
  - Windows Phone
  - PebbleOS
  - Android Wear

Social Networks

- Provide a community aspect, i.e. forms a community that shares information in a multi-directional way
- Common features (regardless of platform):
  - construct a public/semi-public profile;
  - articulate list of other users that they share a connection with;
  - view the list of connections within the system
- Some sites allow users to upload pictures, add multimedia content or modify the look and feel of the profile
- Social networks typically offer more than one channel of dissemination (thus they will be considered platforms with many available dissemination channels):
  - Facebook and Google+: Pages, Groups, Share options
  - LinkedIn and Xing are focused on professional use and fit the purpose of organizations
Social Network

Facebook

- Facebook is a social networking service and website;
- Launched in February 2004;
- It is owned and operated by Facebook, Inc.
- 1.49 billion monthly active users as of June 30, 2015 *
- 1.31 billion mobile monthly active users as of June 30, 2015 *
- Users must register before using the services.
- Users can create a personal profile, add friends, exchange messages, chat (the company has also launched a separate instant messaging service), receive automatic notifications, take part in games, etc.

* http://newsroom.fb.com/company-info/
Social Network

Google+

- Launched in 2011

- Social networking and identity service owned and operated by Google Inc

- Integrates social services such as Google Profiles

- Introduces new services such as Circles, Hangouts and Sparks

- Share photos, videos, links, or anything else that’s on your mind.

- Users can share using the share box on any Google site or +1 buttons across the web.

- There are about 2.2 billion G+ profiles *
- 0.2% – 0.3% of all G+ profiles, about 4-6 million users, have made public posts in 2015 *

* http://uk.businessinsider.com/google-active-users-2015-1
LinkedIn

- Founded in December 2002
- LinkedIn is the world’s largest professional network
- It has over 380 million members *
- LinkedIn connects users to their trusted contacts
- Helps users exchange knowledge, ideas, and opportunities with a broader network of professionals.
- It allows users to search, keep in touch and extend their networks of professionals

* http://expandedramblings.com/index.php/by-the-numbers-a-few-important-linkedin-stats/
Social Network

Xing

- Social and business networking tool for professionals with 9 million users;

- Initially established as Open business Club AG in August 2003 in Germany; name was changed to Xing in November 2006

- Main competitor is LinkedIn

- Seems to attract more small business and independent business owners than its competitors

- Basic membership is free

- The platform uses https and has a rigid privacy and no-spam policy.

* https://corporate.xing.com/no_cache/deutsch/unternehmen/xing-ag/
Social Network

- Market share for December 2011 (according to ComScore):

<table>
<thead>
<tr>
<th>Worldwide</th>
<th>Unique Visitors</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook.com</td>
<td>792,999,000</td>
<td>55.1 %</td>
</tr>
<tr>
<td>Twitter.com</td>
<td>167,903,000</td>
<td>11.7 %</td>
</tr>
<tr>
<td>LinkedIn.com</td>
<td>94,823,000</td>
<td>6.6 %</td>
</tr>
<tr>
<td>Google+</td>
<td>66,756,000</td>
<td>4.6 %</td>
</tr>
<tr>
<td>MySpace</td>
<td>61,037,000</td>
<td>4.2 %</td>
</tr>
<tr>
<td>Others</td>
<td>255,539,000</td>
<td>17.8 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,438,877,000</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

http://techcrunch.com/2011/12/22/googlesplus/?utm_source=feedburner_medium=feed_campaign=Feed%3A+Techcrunch+%28Techcrunch%29

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Top 10 Social Networking Sites 2008-2015


[Graph showing market share of social networking sites from 2008 to 2015]

Created by Phil K짤n
www.dreamgrow.com

Data Source: http://www.dreamgrow.com/
data-graphs/overview-and-factors.aspx

The Kaplan-Meier survival curve is based on Kaplan-Meier survival curve, which is a non-parametric method for estimating the survival function. The Kaplan-Meier method can be used to estimate the percentage of patients with the occurrence of a particular event. The Kaplan-Meier method cannot be used to estimate the occurrence of a particular event because the event is not observed for all patients. The Kaplan-Meier method can be used to estimate the occurrence of a particular event because the event is not observed for all patients. The Kaplan-Meier method can be used to estimate the occurrence of a particular event because the event is not observed for all patients.

www.sti-innsbruck.at
Internet Forums and Discussion Boards

- Web applications managing user-generated content
- Early forums can be described as a web version of an email list or newsgroup
- Internet forums are prevalent in several countries: Japan, China
- Are governed by a set of rules
- Users have a specific designated role, e.g. moderator, administrator
- The unit of communication is the post
- Common features
  - Tripcodes and capcodes - a secret password is added to the user's name following a separator character
  - Private message
  - Attachment
  - BBCode and HTML
  - Emoticon or smiley to convey emotion
  - Poll
  - RSS and ATOM feeds
  - Other forum features
Online Discussion Groups

- Many-to-many
- Threaded conversations
- Usually created on a particular topic
- Have different access levels
- Better for disseminating within a group that shares common interests as the purpose of the services is to enable collaboration, knowledge and information sharing and open discussions
- Examples: Google Groups, Facebook Groups, Yahoo! Groups, LinkedIn Groups, Xing Groups.
- Similar in many ways to Discussion boards and Internet Forums

Google Groups

- Not a common forum software
- Includes an archive of Usenet news group postings dating back to 1981
- Strongly focuses on the concept of mailing list - Can have parallel mailing lists (can use Google groups to archive another mailing list, such as Yahoo Groups)
- Need a Google account to access groups or post messages;
- What can be shared: there’s a limit of 25MB including attachments/ group
- Joining a group: Invitation or request. Owners can make an opt-out issue by inviting members directly through their email address
- Notifications:
  - No email: read group postings only online
  - Abridged Email: one summary email of new activity/day
  - Digest Email: get up to 25 full messages in a single email
  - Email: send each message to me as it arrives
- Noise: the level of noise is dependent on the managers;
- Fully integrated with Google products: Google Calendars, Google Docs, Google Sites
Online Discussion Groups

Yahoo! Groups

- **Yahoo! Groups** is one of the world’s largest collections of online discussion boards.
- Group messages can be read and posted by e-mail or on the Group’s webpage like a web forum.
- Members can choose whether to receive individual, daily digest or Special Delivery e-mails, or simply read Group posts on the Group’s web site.
- Groups can be created with public or member-only access.
- Yahoo! Groups service provides additional facilities for each Group web site, such as a homepage, message archive, polls, calendar.
- announcements, files, photos, database functions, and bookmarks.
Online Discussion Groups

Facebook Groups

• Create a private space (group) to share
  – Post updates, questions, photos;
  – Chat with the group;
  – Create share docs
  – Schedule group events

• Members can stay in touch using:
  – Notifications regarding new posts and updates
  – The group’s shared email address to connect off Facebook

• Pages allow real organizations, businesses, celebrities and brands to communicate broadly with people who like them.
• Pages may only be created and managed by official representatives.
• Privacy: information and posts are public and generally available to everyone on Facebook.
• Audience:
  – Anyone can like a Page to become connected with it and get News Feed updates.
  – There is no limit to how many people can like a Page.
  – Visitor statistics
• Communication:
  – Page admins can share posts under the Page’s name.
  – Page admins can also create customized apps for their Pages and check Page Insights to track the Page’s growth and activity.

Groups: smaller number of people.
Pages: large number of followers

Groups provide a closed space for small groups of people to communicate about shared interests.
• Groups can be created by anyone.
• Privacy: groups offer three levels of control over shared information: open, closed and secret. In secret and closed groups, posts are only visible to group members.
• Audience:
  – Group members must be approved or added by other members.
  – When a group reaches a certain size, some features are limited (e.g. chat).
  – The most useful groups tend to be the ones you create with small groups of people you know.
• Communication:
  – In groups, members receive notifications by default when any member posts in the group.
  – Group members can participate in chats, upload photos to shared albums, collaborate on group docs, and invite all members to group events.
## Online Discussion Groups

### LinkedIn
- Discover the most popular discussions.
- Take an active part in determining the top discussions by liking and commenting.
- Follow the most influential people in your groups by checking the Top Influencers board or clicking their profile image to see all their group activity.
- Review new members or search for specific ones.
- See both member-generated discussions and news in one setting.
- Easily browse previews of the last three comments in a discussion.
- Find interesting discussions by seeing who liked a discussion and how many people commented.

### Xing
- Social and business networking tool for professionals with over 8 million users;
- Initially established as Open business Club AG in August 2003 in Germany; name was changed to Xing in November 2006
- Main competitor is LinkedIn
- Seems to attract more small business and independent business owners than its competitors
- Basic membership is free
- The platform uses https and has a rigid privacy and no-spam policy.
### Online Discussion Groups

#### Tool Website Description

<table>
<thead>
<tr>
<th>Tool</th>
<th>Website</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meetup</td>
<td><a href="http://www.meetup.com">www.meetup.com</a></td>
<td>Meetup is an online social networking portal that facilitates offline group meetings in various localities around the world [Wiki].</td>
</tr>
<tr>
<td>GroupSpaces</td>
<td>groupspaces.com</td>
<td>GroupSpaces (styled groupspaces) is a London-based online company that provides technology to help real-world clubs, societies, associations and other groups manage their membership and activities, and promote themselves online [Wiki].</td>
</tr>
<tr>
<td>Windows Live Groups</td>
<td>groups.live.com</td>
<td>Windows Live Groups is an online service by Microsoft as part of its Windows Live range of services that enable users to create their social groups for sharing, discussion and coordination [Wiki].</td>
</tr>
</tbody>
</table>

---

### Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Google Groups</th>
<th>Yahoo Groups</th>
<th>Facebook Groups</th>
<th>LinkedIn Groups</th>
<th>Xing Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forums</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Chat</td>
<td>Threaded conversation</td>
<td>Yes</td>
<td>Yes (max 250 members)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shared email</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Upload content (documents, images, videos)</td>
<td>Not part of groups Google Docs</td>
<td>Yes</td>
<td>Yes</td>
<td>Via weblinks</td>
<td>Yes</td>
</tr>
<tr>
<td>Maximum Storage</td>
<td>25 MB posts and attachments</td>
<td>200 MB</td>
<td>Unlimited</td>
<td>--</td>
<td>2 MB</td>
</tr>
<tr>
<td>Integrate external content (RSS feeds)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Notifications</td>
<td>Customizable: no email, abridged, digest, email</td>
<td>Email</td>
<td>Email, FB notifications</td>
<td>Email, bundled</td>
<td>http newsletter</td>
</tr>
<tr>
<td>Search features</td>
<td>Google Search / Directory Search</td>
<td>Yahoo search, separate group search</td>
<td>Not a separate function (Facebook classic search), clumsy and no group suggestion</td>
<td>Advanced search for group, member, event</td>
<td>Advanced</td>
</tr>
</tbody>
</table>
## Social Network vs. Online Discussion Groups

- ODG have a limited number of members;
- ODG are intended for a smaller number of people to collaborate (Facebook places the number at 250 members);
- ODG have a specific purpose – a goal that unites all members, i.e. a discussion topic.
- In ODG the number of members and the ideas of the members are known to all participants.
- ODG have a creator/owner recognized by all members;
- ODG follow a set of rules determined by the administrator, moderator or owner;
- In ODG members may have different roles: administrator, moderator, owner, participant, etc.

---

## Social Network vs. Online Discussion Groups

- Moderators and administrators ensure that the ODG’s internal code of conduct is followed;
- In ODG all members have access to the same shared resources;
- ODG members do not have to be connected with the other members (other than the group) to communicate
- SN vary in size and heterogeneity;
- In SN different members have access to different resources (e.g. some members might have restricted access to a friend’s photo archive);
- In SN members do not know how many participant exist, or who they are;
"PESO" Model for Media Channels

Paid: the channels in which money is paid to place the message, and control its distribution.

Earned: the published coverage of an enterprise, cause or person's message by a credible third party, such as a journalist, blogger, trade analyst or industry influencer.

Shared: the pass-along sharing and commenting upon your message by the community through social channels.

Owned: the editorial and messages you (or our writers on your behalf) write, publish and control through your own, dedicated blog or other channel.

Illustration credit: Cision 2015

Model described e.g. in Sammer, P. (2014). Storytelling. O'Reilly Germany

Agenda

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1. Motivation
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4. Communication
5. The Semantic Communication Engine Innsbruck (SCEI)
6. Added Value in eTourism
7. Quiz
8. Exercises
What is Social Media Monitoring?

Definition*

Social Media Monitoring is the continuous systematic observation and analysis of social media networks and social communities. It supports a quick overview and insight into topics and opinions on the social web.

*http://de.wikipedia.org/wiki/Social_Media#Monitoring
What is Social Media Monitoring?

• SMM tools facilitate the **listening** of what people say about various topics in the social media sphere (blogs, twitter, facebook, etc.)

• **Listening**: is active, focused, concentrated attention for the purpose of understanding the meanings expressed by a speaker.

• **Hearing**: is an accidental and automatic brain response to sound that requires no effort.

Are you listening?

What is Social Media Monitoring?

• Harness the wealth of information available online in the form of user-generated content

• These tools offer means for listening to the social media users, analyzing and measuring their activity in relation to a brand or enterprise

• Offer access to real customers’ opinions, complaints and questions, in real time, in a highly scalable way
What is Social Media Monitoring?

The Social Media Monitoring (SMM) tools are NOT Social Media Dashboard tools. Their goal is NOT to administrate your social media accounts. But, their goal is to **ENABLE YOU TO LISTEN** to what is being said about certain topics on the web.

Why do we need the SMM?

- “The direct, unfiltered, brutally honest nature of much online discussion is gold dust to big companies that want to spot trends, or find out what customers really think of them.”
  - *The Economist*, March 2006

- “As control of a brand’s marketing messages—and, indeed, its very image—migrates from traditional media to social media, companies need to become increasingly adept at paying attention to how they’re being perceived in the online world.”
Why do we need the SMM?

- Provide valuable insight from the side of enterprises regarding which strategy they should employ.
- Determine the most effective and ineffective offered features of an enterprise.

Why do we need the SMM?

- The speed at which one can investigate a topic of interest, which greatly exceeds that of a traditional survey approach.
- Social Media Monitoring is more precise, faster and more economical than traditional expert panel analysis.
- Information is conveyed to someone who can absorb, process and formulate a response – it’s really hearing vs. listening.
### Why do we need the SMM?

- Reputation management
- Event detection, issue and crisis management
- Competitor analysis
- Trend and market research plus campaign monitoring
- Influencer detection and customer relationship management
- Product and innovation management
- Manage Word of mouth

### Channels to analyze

1. **Social networks, e.g.:**
   - Facebook (Q1 2012):
     - 526 million daily active users
     - 3.2 billion Likes and Comments per day
     - 500K comments per minute
     - 700K status updates per minute
     - 80K wall posts per minute
Channels to analyze

1. Social networks, e.g.:
   - Twitter:
     - 200 million Tweets per day (2011)
     - 200K Tweets per minute
   - LinkedIn: 147 million users
   - Google+: 170 million users

2. Sharing networks, e.g.:
   - YouTube:
     - 4 billion videos are viewed a day
     - 100 million people take a social action on YouTube every week (likes, shares, comments, etc)
   - Flickr: >6,500 new photos per minute
   - Pinterest:
     - 13 million users
     - American users spend an average of 97.8 minutes
Channels to analyze

3. Email lists

- 2172 million Email users
- 3375 million Active email accounts
- 2.8 million emails per second
- 90 trillion emails per year

4. Group Communication and Message Boards (e.g. Google Groups, Yahoo! Groups, Facebook Groups, etc.)

- **Forums**: 2K posts per minute

- **Yahoo! Groups**:
  - 9 million groups
  - 113 million users
  - 933 thousand unique visitors daily
Channels to analyze

5. News feeds

- Total Feeds*: 694,311
- Atom Feeds*: 86,496
- RSS feeds*: 438,102 (63% of the total)

*source: http://www.syndic8.com

Channels to analyze

6. Blogs:

- >95 million blogs available online
- 22K posts per minute
- Tumblr (Q2 2012):
  - 55.9 Million blogs
  - 23.3 Billion posts
  - 20K posts per minute
- WordPress (Q2 2012)
  - 73,724,911 WordPress sites
## Channels to analyze

### 7. Traditional mediums:

- **TV:**
  - 365 TV channels licensed in Germany

- **Radio:**
  - 822 Radio stations in Germany

- **Print mediums (newspapers, magazines):**
  - 382 Daily newspapers in Germany
  - 4180 Weekly magazines in Germany

### 8. Online News:

- News websites: >25,000

- Online radio stations: >2700 Online radio stations in Germany
Available media channels

The Conversation

Available media channels:
- Forums/NewsGroups
- Social Networks
- Wikis
- Photo Sharing
- Blogs
- Microblogs
- Mainstream Media
- Video Sharing
- Social Media News Aggregators

www.sti-innsbruck.at
Available media channels

How many people would you need to manage the chaos of social media activity and extract valuable insights for your brand?

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6. Added Value in eTourism
Communication

What is communication?

• Communication (from the Latin commūnicātiōn- = "share") refers to the process of imparting or interchange of thoughts, opinions, or information by speech, writing, or signs.*

• Communication may mean**:
  – The act of transmitting
  – A giving or exchanging of information, signals, or messages as by talk, gestures, or writing
  – The information, signals, or message
  – Close, sympathetic relationship
  – A means of communicating; specif., a system for sending and receiving messages, as by telephone, telegraph, radio, etc.
  – A system as of routes for moving troops and material
  – A passage or way for getting from one place to another.
  – The art of expressing ideas, esp. in speech and writing.
  – The science of transmitting information, esp. in symbols.

*http://dictionary.reference.com/
**http://answers.yourdictionary.com/language/what-is-communication.html
What is communication?

• Communication is a social interaction where at least two interacting agents share a common set of signs and a common set of semiotic rules.

• Types of communication:
  – **Spoken or Verbal communication**: face-to-face, telephone, radio or television.
  – **Non-verbal communication**: body language, gestures, voice tone.
  – **Written communication**: letters, e-mails, books, magazines, information written over the Internet.
  – **Visualization communication**: such as graphs, charts, maps, or logos.

What is communication?

**Directional Streams**

• **Vertical communication**:
  – **Descendant**: Communication that begins in the top management for an enterprise and flows in the way of the hierarchy base of the organization.
  – **Ascendant vertical communication** (opposing type).

• **Lateral or horizontal communication**:
  – Consists of intergroup communication
  – Usually not dependent on standards and rules established by the formal organization.
What is communication?

Need for effective communication

- Issue instructions and enable the business to operate (see vertical communication)
- Enable people at the same level to communicate with each other (see horizontal communication)
- Communicate with stakeholders and employees.
- Provide essential information.
- Keep stakeholders informed.

Models of communication:

- Conceptual models used to explain the human communication process
- The first major model for communication was created by Shannon and Weaver (1949) to represent the functioning of radio and telephone technologies.

  Initial model was composed of three primary parts:
  - Sender - the part of the telephone a person spoke into;
  - Channel – the telephone itself;
  - Receiver – part of the phone where one could hear the other person.

  “noise” component appeared as the authors recognized the presence of static that interferes with one listening to a telephone conversation.
What is communication?

Communication process elements*:

- **Transmitter or communication’s message source**: initiates the communication process and sends the message.
- **Message transmission channel**: enables the transmission of the message. Connects the transmitter and the receiver.
- **Message receptor**: entity that receives and decodes the message.
- **Noises**: obstructions in the communication process. Noise is internal (occurs during the encoding or decoding phases) or external (occurs on the transmission channel).
- **Feedback**: the answer the receptor gives as a result of the received message. Can be transmitted by the same channel or a different one.

*Schematic diagram of a general communication system as proposed by Shannon and Weaver (1949).
What is communication?

However:

- The model presented is a minimalist abstraction of the reality it attempts to reproduce.
- Most communication systems are more complex.
- Most information sources (and destinations) act as both sources and destinations.
- Transmitters, receivers, channels, signals, and messages are layered both serially and in parallel.
  - There are multiple signals transmitted and received, even when they are converged into a common signal stream and a common channel.

Moreover,

- The Shannon model is not a model of communication.
- It is a model of the flow of information through a medium.
- It is incomplete and biased.
- It is applicable to the system it maps (telephone or telegraph), rather than most other media.
- It suggests a “push” model in which sources of information can inflict it on destinations.
What is communication?

In the real world of media:

• Destinations are self-selecting “consumers” of information who have the ability to:
  – select the messages they are most interested in
  – turn off messages that don’t interest them
  – focus on one message in preference to other in message rich environments
  – they can choose to simply not pay attention

• Messages are frequently stored for elongated periods of time and/or modified in some ways before they are accessed by the “destination”.

• Communication is almost never unidirectional and it is often indirect.

What is communication?

• Communication is bidirectional
• Agents interact and communicate in parallel, permanently alternating their role in these acts of communication.
• Destinations provide feedback in the form of a message or a set of messages.
• The source of feedback is an information source.
• The consumer of feedback is a destination.

Individuals are simultaneously engaging in sending and receiving of messages (Barnlund, 2008).
What is communication?

• We communicate to cooperate – regardless of the channel employed.

• Communication is
  – Multi-channel
  – Self-referential (the transmitter also communicates to himself), i.e. reflexive
  – in a network (communication does not occur in a void, the actors communicating are not isolated).

What is communication?

• Computer mediated communication is compared to other forms of communication media based on the following aspects:
  – Synchronicity
  – Persistence or "recordability"
  – Anonymity
  – Transience
  – Multimodal language
  – Relative lack of governing codes of conduct (McQuail, 2005)

• A strong dependence on the environment can be observed.
What is communication?

Our approach:

• We disseminate information

• Deal with the aggregation of feedback and impact by:
  – simply going through the dissemination chain in the opposite direction
  – integrating them under the appropriate knowledge item

But also

Online Communication

• It is not bound by physical, temporal and social limitations.

• Anonymity and privacy depends on the context of the channel used.

• enables large number of audience to transmit and receive information.
What is communication?

- Communication must support:
  - Design of an information item;
  - Dissemination of an information item over suitable channels;
  - Observation of communication acts
  - Measure, analysis, and aggregation of the information published

- A holistic methodology for supporting communication must support the above subtasks that form a circle or spiral

- These activities form a circle that we call the life cycle model of communication

A Lifecycle of Communication

Efficient and effective communication not only creates and disseminates information, but also deals with measurement, analysis and aggregation of feedback and impact, collecting responses in the various channels and integrating them under an appropriate knowledge item.
Summary

- Communication (from the Latin communicatio = "share") refers to the process of imparting or interchange of thoughts, opinions, or information by speech, writing, or signs.
- Types of communication: (1) Spoken or Verbal communication; Non-verbal communication; Written communication; and Visualization communication.
- Directional streams: vertical communication (descendant and ascendant) and lateral or horizontal communication.

Summary

- Shannon and Weaver (1949) communication model consists of: sender, channel, receiver, information source, and destination.
- The model is incomplete: communication is bidirectional, agents interact and communicate in parallel, permanently alternating their role in these acts of communication.
- Communication between two actors has three steps: (1) send message; (2) hear own message; and (3) receive non-verbal response.
- Communication is
  - Multi-channel
  - Self-referential (the transmitter also communicates to himself)
  - Reflexive
  - Embedded in a network (communication does not occur in a void, the actors communicating are not isolated).
Summary

• Computer mediated communication is compared to other forms of communication media based on the following aspects: Synchronicity; Persistence or “recordability”; Anonymity; Transience; Multimodal language; and Relative lack of governing codes of conduct (McQuail, 2005).

• Communication must support:
  – Design of an information item;
  – Dissemination of an information item over suitable channels;
  – Observation of communication acts
  – Measure, analysis, and aggregation of the information published.

• To make Online Communication efficient and effective, a tool needs to
  – Integrate publication and monitoring (and support active and reactive communication).
  – Trace the communication in an easy to use manner.
  – Address the issue of multiple channels and multiple agents.
  – If an agent starts a communication – the agent takes the role of the message sender – we talk about active communication.
  – Re-active communication describes communication situations initiated by an external agent – the agent takes the role of the receiver and will re-act on the received message.

• The communication history IS the trace and Communication must be remembered.
Summary

• Transmitters must be able to switch channels properly and identify the channel where the response will appear.

• Due to the abundance of channels, most of the times there are more than one agents transmitting and receiving messages – a workflow must be set up to ensure that all agents are aware of what is discussed and who is speaking.

• Communication requires at least 2 agents: a speaker and a listener

• However, communication does not occur in a void – thus the initial model may never occur in real life as there may always be more than one listener or more than one agent.

• The models are: 1-to-1, 1-to-n, n-to-1, and m-to-n.

Summary

• The trace is composed by passing through the communication channel for a number of times (where \( n \geq 1 \), and \( n \) is a finite number)

• Thus a trace is a set \( T = \{S, L, M, T, C\} \)
  - \( S \) – the collection of speakers, \( S \neq \emptyset \)
  - \( L \) – the collection of listeners, \( L \neq \emptyset \)
  - \( M \) – the message collection, \( M \neq \emptyset \)
  - \( T \) – the time and date, \( T \neq \emptyset \)
  - \( C \) – the possible channels, \( C \neq \emptyset \)
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---

## Multi-channel communication

**SCEI**

- Branch specific concepts
- Distribute content
- Collect feedback + statistics

- Web/Blog
- Social Web
- Web 3.0/Mobile/Other
- Press releases + Ads
Multi-channel communication

- Scalable on-line communication tool based on machine processable semantics, that supports processes such as yield, brand, and reputation management.

- SCEI is entitled to support the following process:
  1. Content creation
  2. Selection of publication channels
  3. Content adaptation
  4. Publication
  5. Feedback collection
  6. Content detection
  7. Impact analysis
**SCEI Reference architecture**

- Content creator
  - Domain and task specific interface
  - Workflow Engine/Communication patterns
  - Content Management System
  - Publication
  - Media Monitoring
  - Engagement
  - Impact Analysis

- Workflow designer

- Target users

---

**seekda booking engine**

- Portal
  - Affiliates
  - Google
  - 105/60 Online-Channels
  - Direct Channels

- Hotelwebsite
  - Hotelwebsite mit API Connect

- Hotelorganisationen

- Pegasus
seekda booking engine - direct bookability for hotels

- Booking quickly and directly via hotel Web sites

- Seekda producs for direct bookability:
  - Dynamic Shop
  - Dynamic Shop Mobile

- Benefits:
  - Hotels do not give part of their profit to booking channels
  - You do not lose the guest having him booking other hotels

Data in the Background - Linked Open Data (LOD)

- Web of Documents
- Web of Data

Hyperlinks

Typed Links

“Documents”

“Things”
Linked Open Data (LOD)

LOD Principles:

1. Use URIs as names for things.

2. Use HTTP URIs so that people can look up those names.

3. When someone looks up a URI, provide useful RDF information.

4. Include RDF statements that link to other URIs so that they can discover related things.

Facts:
- 295 data sets
- Over 31 billion triples
- Over 504 billion RDF links between data sources

Figure from http://www4.wiwiss.fu-berlin.de/lodcloud/state/, September 2011
Linked Open Data (LOD)

- Use LOD to integrate and lookup data about
  - places and routes
  - time-tables for public transport
  - hiking trails
  - ski slopes
  - points-of-interest

Linked Open Data (LOD) - data sets

- Open Streetmap
- Google Places
- Databases of government
  - TIRIS
  - DVT
- Tourism & Ticketing association
- IVB (busses and trams)
- OEBB (trains)
- Ärztekammer
- Supermarket chains: listing of products
- Hofer and similar: weekly offers
- ASFINAG: Traffic/Congestion data
- Herold (yellow pages)
- City archive
- Museums/Zoo
- News sources like TT (Tyrol's major daily newspaper)
- Statistik Austria
- Innsbruck Airport (travel times, airline schedules)
- ZAMG (Weather)
- University of Innsbruck (Curricula, student statistics, study possibilities)
- IKB (electricity, water consumption)
- Entertainment facilities (Stadtcafe, Cinema...)
- Special offers (Groupon)
On the fly service integration as you pay

- Data and services from destination sites integrated for recommendation and booking of
  - Hotels
  - Restaurants
  - Cultural and entertainment events
  - Sightseeing
  - Shops

On the fly service integration as you pay

- Solutions for ad-hoc service integration for touristic destination sites

- Two integration approaches:
  - via Web scrapping as a quick integration solution
  - via APIs and backend integration for a long term, durable solution
**On the fly service integration as you pay**

- **Web scraping** integration
  - Create wrappers for current web sites and extract data automatically
  - Many Web scraping tools available on the market

**On the fly service integration as you pay**

- **APIs and backend** integration
  - Contractual based integration of data, functionalities and services for mutual benefits
  - More fine grain integration not only at the level of Web but deeper, at the level of backend systems
  - Requires usually enterprise application integration solutions (e.g. Web services)
Everything integrated

- Integration into a comprehensive map of multi-channel communication, seekda booking engine, Linked Open Data and on the fly service integration as you pay to generate added value for businesses as well as customers
- Combination of multi channel communication and yield management
  - onlim
  - seekda booking solutions
- enriched with Linked (Open) Data
  - Machine understandable interlinked data
  - Bike and hiking trails, sight information, etc.
- and on the fly service integration as you pay
  - Solutions for ad-hoc service integration for touristic destination sites
  - Bike rental, ski passes, etc.
  - Services are quickly integrated through scrapping and later through API and backend integration

Everything integrated: Tourist Map Austria

- Based on Open Street Map
Everything integrated: Tourist Map Austria

- Based on Open Street Map
- Increase on-line visibility for hotel and destination via multi-channel communication - SCEI
- Hotels, ski passes, etc. directly bookable – seekda engine
Everything integrated: Tourist Map Austria

- Based on Open Street Map
- Increase on-line visibility for hotel and destination via multi-channel communication - SCEI
- Hotels, ski passes, etc. directly bookable – seekda engine
- LOD to integrate and lookup data about hiking trails, ski slopes, etc.

- On the fly service integration as you pay
Everything integrated: Tourist Map Austria

- Based on Open Street Map
- Fullscreen map with GPS for orientation
  - Optimized for tablets and smartphones
- Data control
  - Hoteliers, Townships, Associations, etc. can easily maintain their own data
  - Integration of public transport (missing in Google maps)
  - Direct booking possible
- Social
  - Integration of Facebook, Twitter, etc.
  - Crowd sourcing of reviews, tips, etc.
  - Plan common activities on-site

SCEI

Everything integrated

= independence for the hotelier and added value for the customer
Agenda

Formalities:
- Course overview
- VU organization

In this VU – session 1:
1. Motivation
2. Multi-channel Publishing / Dissemination
3. Social Media Monitoring
4. Communication
5. The Semantic Communication Engine Innsbruck (SCEI)
6. Added Value in eTourism

The value proposition in eTourism

2 Bio € Business Volume/Year in Tyrol

10% Marketing/Communication 15% Booking Fees 40% Accommodation Costs 5% Profit 30% Taxes
The value proposition in eTourism

The Problem:

- Marketing
- Accommodation Costs
- Profit
- Taxes

The Goal:

- Marketing
- Accommodation Costs
- Booking Fees
- Profit
- Taxes
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- When dates are not present on the figures, they refer to the status by 2013.

References (for Communication)


References (for Multi-Channel Communication, Social Media and Semantic Web)


Questions?

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