Microsoft's Cloud

Microsoft's many Entrances to the Cloud

Over the past three years Ray Ozzie changed the culture of Microsoft to one where the company behaves more like a startup company than a giant in order to innovate new products and services faster.
Previously, a big part of any development team at Microsoft was making sure its new product worked in lockstep with everything else the company produced. This "unification" criterion was something that Bill Gates had always hammered on.
Now Ray Ozzie pushes the developers to rush ahead and build new things without waiting for integration, unification and convergence. The result is a variety of brand new cross-over products that confuse the consumer. This problem is amplified now due to the nature of the   perpetual beta   where it s socially acceptable to release preliminary beta versions for apps or services.
Consequence: Microsoft's different Office developer groups and different Azure teams offer their own gateways to the cloud and behave as small competing companies as real competitors do.
See: **James Senior Blog**.
The Google way is far more experimental: Google dumps a lot of competing free trial software on the market and observes whether somebody is interested in. When there are users, they will soon detect that this is just a preliminary test balloon. Such users will complain about quality and when many users complain it's a reliable proof of use and public interest.
Anyway, such practical market analysis pushes Google's reputation to be a creative company.

Microsoft Office Live Workspace MOLW

MOLW offers 5 GB of free cloud space. It's a service of the **Office Live** service portal bit it isn't restricted to **Microsoft Office** users nor to Office file formats.
The space can be shared with anyone. Many authors can work within one document and there is an automatic synchronization service.
Whatever you upload with MOLW you will see it when you check in later under the same **Windows Live ID** in **Live Mesh** (see below).
Probably MOLW will merge one day with SkyDrive and later with the final release of the more powerful **Live Mesh**.
See: **Wikipedia/Office_Live** and **Microsoft Office Live Workspace beta**.

Microsoft Office Live Small Business MOLSB

MOLSB extends MOLW by a free one-year website hosting and email service.
The free service just includes a fourth level domain such as `www.myName.web.officelive.com`.
A second level custom domain such as `www.myName.com` can be booked at $ 14.95/year (in Germany: **http://smallbusiness.officelive.com/de-DE/pricing**).
Additional cloud space and users are also available, but MOLSB doesn't support any server side scripting such as PHP, ASP, ASP.NET, SQL nor any other database, not even Microsoft Access.
Advice: You have to deactivate MOLSB's annoying web design tool when you want to host arbitrary HTML-, and PDF-web content.
See: **http://ask.officelive.com/smallbusiness**

Microsoft Windows Live SkyDrive

SkyDrive is a file storage (25 GB free !) and sharing service. It's a service of the **Windows Live** service portal, but it's available outside of Windows too. Sooner or later Microsoft will merge MOLW and SkyDrive with Windows Live.
See: **Checkin to SkyDrive**.

Microsoft Windows Azure

Windows Azure has the moniker 'Windows' because Microsoft is branding it the "Operating System in the Cloud".
That means Azure is the generic term for all services and tools that extend Microsoft Windows from a classic operating system into a cloud operating system. Azure is Windows in the cloud.

Single user view:	Azure is the internet portal **Live Mesh** which is a modernized mixture of the internet portal **Office Live** plus the portal **Windows Live**. The user is allowed to write into and to read from his free 5 GB cloud space and to synchronize the files among all of his computers, PDAs and mobile phones. Drawback: The user is restricted to an Azure subset called **Live Services**.
Business view:	Azure are **Live Services** plus **SQL Azure Database** aimed to shift internet business into the Microsoft cloud.
Programmers view:	Azure is a layered set of services, SDKs and tools for writing **Mesh-Enabled Web Applications**. 1. The basic layer are the **Windows Azure Services**, with their **SDK** and the **Tools for Visual Studio**. 2. The second layer contains: 2a: **Live Services** and the developer tools of the coming version of Windows Live SDK. 2b: **.NET Services** and the **.NET Services SDK**. 2c: **SQL Data Services (SDS)** + **SDS Library**.

Introduction to Windows Azure Services on MSDN: **About the Azure Services Platform and Windows Azure**.
Synopsis: **Wikipedia/Live_Services**.

Prices for power users		
Windows Azure	computing	$0.12 per hour
Windows Azure	storage	$0.15 per gigabyte
Windows Azure	storage transaction	$0.10 per 10 kilobyte
Windows Azure	bandwith	$0.10 in/$0.15 out per gigabyte
SQL Azure	Web Edition Database	1 gigabyte relational database: $10
SQL Azure	Business Edition Database	10 gigabyte relational database: $100
SQL Azure	bandwidth	$0.10 in/$0.15 out per gigabyte
.NET Services	messages	$0.15 per 100 kilobyte message operations

The future of Microsoft Windows and Office
The next Microsoft operating system after Windows 7 will probably integrate the complete Azure services. Consumers will write into and read from the cloud; they can throw away their harddisks. Application programs and games will mutate to cloud services. They are not bought and installed anymore. All Microsoft Office programs will go this way. Their basic use will be free but stuffed with advertising while power users and companies will be charged by call, volume and velocity.

Microsoft Live Mesh

Live Mesh is more powerful than Microsoft Office Live Workspace and SkyDrive.
It offers a free 5 GB cloud space (= the mesh) together with sync-, share- and remote access-services.
It focuses on a user who works with different computers at different places and with mobile devices.
On any computer Live Mesh installs a beautiful virtual desktop GUI called the Mesh Operating Environment
MOE, written as RIA in WPF together with a sync program.
The sync program installs in Windows Explorer an additional line into the right click menu when you select a
folder : `Add folder to Live Mesh....`
After uploading the folder into the cloud, the directory icon turns blue to indicate the folder as being synced.
From now on the folder has another line in its right click menu: `Live Mesh Options` which expands to a
second slide out menu that offers 4 command lines:
`Change sync settings...`, `Invite members...`, `Manage members...` and `Delete folder....`
After setting up Live Mesh on all of your computers, your synced folders and files will appear on all of them.
You connect to the MOE using the Mesh task bar icon or through **www.mesh.com**.
After logging on, you are presented with your synced folders so you can access any of your files through the
web or you can transport yourself to another computer that is set up in your mesh.
Live Mesh Remote Desktop opens a window in the computer you are currently using and gives you access to
even those folders you haven't synchronized.
Try to copy and paste files between your remote computer and your local computer.
The remote window will appear exactly as your desktop looks including your desktop icons, taskbar and any
opened windows or programs.
You use the remote desktop as you would normally use your desktop as if you are directly in front of your
computer.
This comes in handy when you need to use a program on your home or office computer that is not available or
installed on the computer where you are located.
You can also select a file on your computer that is not currently synced and drag it into a synced folder. This
service is cool.
See: **Wikipedia/Live_Mesh**.

There are 3 bundles of services:	**Azure Services** contain **Live Services** contain **Mesh Services** and programming Mesh Services is the core of cloud programming.
Azure Services (highest)	all **Live Services** + .NET- + SQL Services
Live Services	all **Mesh Services** + Identity- + Directory- + Storage-Services
Mesh Services (basic)	Users- + Devices- + Applications- + Synchronisation-Services

Platforms and Services

The term "Platform" means a set of services plus a developer environment to link these services together and to write user interfaces which present everything to a customer.

Both Azure and Live Mesh (both in Beta stage) are said to be "Platforms" because they offer bundles of cloud services together with Visual Studio tools. They share a common foundation of services but Live Mesh (being just a subset of Azure) already has a beautiful ready-to-use GUI around its Live Services.

The more powerful Azure platform has no such GUI and developers have to write their own user interface.

Differences between	Azure Platform	Live Mesh Platform
User Interface	none, open access via Java, PHP, Ruby, Unix.	Windows Mesh Operating Environment MOE
Offers Access to	Azure Services	Live Services, which contains Mesh Services
Typical Owner	company	single person
Scope focused on	global business	two or more computers of one person
Main Behavior	waiting for requests	active sync + integration of personal apps, data and devices
Software bases on	basic naming + registration + relay (relay = connectivity + event binding)	**.NET Service Bus**
Programming Tool	Azure SDK	Live Framework SDK and Tools
Roles	Web Role, Worker Role, Data Storage	none
Database	SQL	none

Links:
Abolade Gbadegesin: Mesh Services Architecture and Concepts
Arash Ghanaie-Sichanie: Mesh Enabled Web Applications
The Future of the device Mesh
Feed Sync and Mesh Synchronisation Services

Microsoft Mesh Enabled Web Applications MEWA

MEWA run online inside a Web Browser and offline on Windows.

A MEWA builds a rich client (Cloud-to-Client) to extend the web experiences into devices and desktop. MEWAs offer a much richer user experience than what can be delivered within the confines of a web browser. Examples: Ebay Desktop, Amazon Unbox Video Player, Live Writer Beta, Blockbuster have a downloadable rich client to complement their web offering.

The data that the MEWA-user generates/updates on the client has to be synced with the cloud so it is available when you want to access the data from a device that does not have the MEWA.

MEWAs have an integrated identity management and MEWA-users can share their data with others.

MEWAs can run:

1. from a shortcut on Windows Desktop starting `MeshAppHost.exe` which invokes the application offline.
2. from the web page `http://home.live.com` which starts a Live Mesh instance of the application online.
3. as a mixture of 1. and 2.

Software as a Service SaaS (pronounced 'sass') means software deployment via the web whereby a provider licenses an application to customers for temporal use on demand. SaaS software vendors may

a) host the application in the cloud and just download a GUI once (e.g. a browser applet) or

b) download the complete application to the consumer device, disabling it after use or

c) download a mixture of a) and b).

Example: **Write Online**.