



# La predisposizione di ambienti virtuali per la collaborazione nella gestione delle emergenze

**Corrado De Bari**

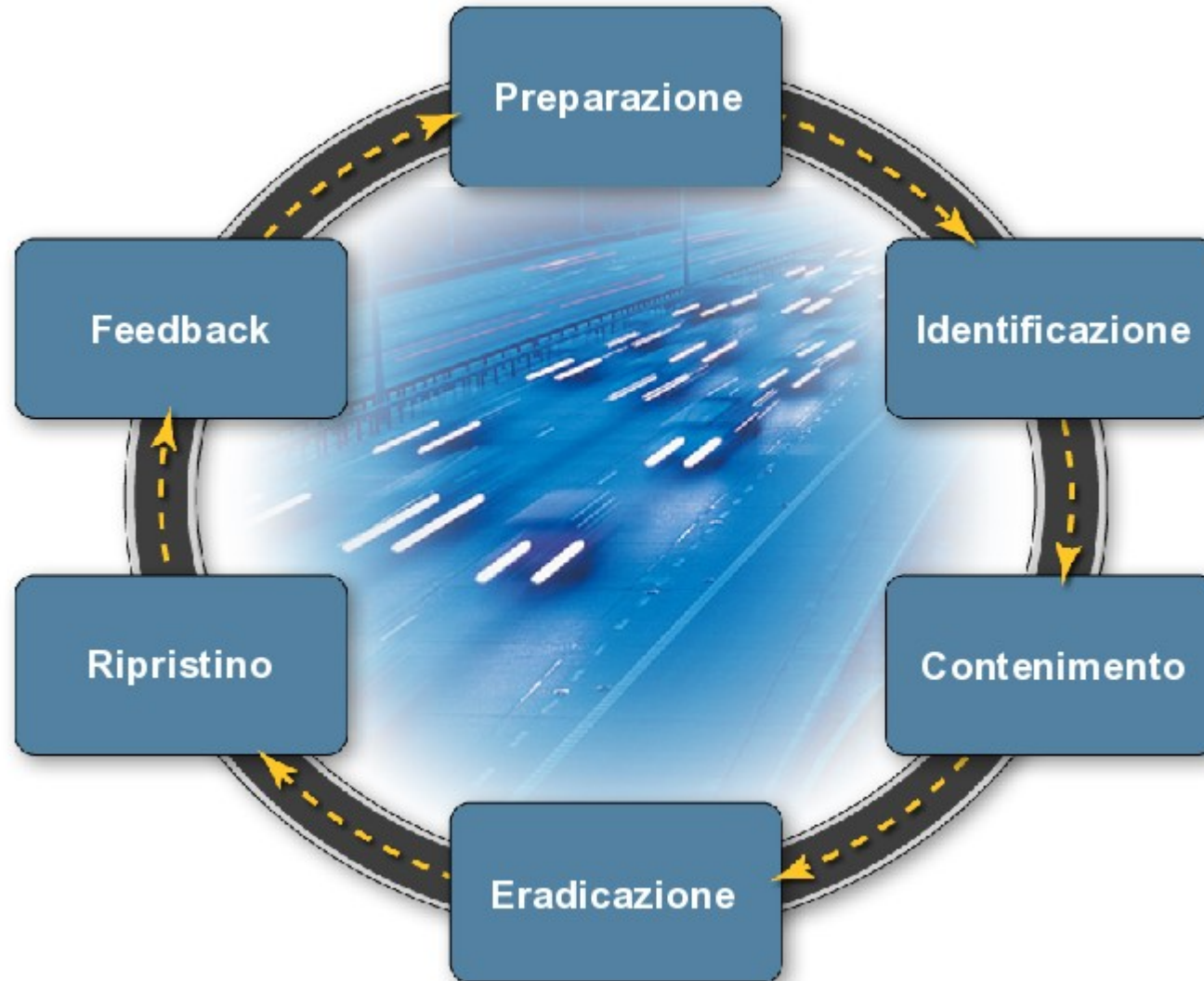
*Software & Java Ambassador*

Global System Engineering

Sun Microsystems Italia S.p.A.



# Lifecycle Management of Emergencies



# What is Project Wonderland ?

- **Sun Labs research project**
- Open source toolkit for creating 3D virtual worlds
- Design focus on business, education & collaboration
- Supports high fidelity audio, shared applications, telephone integration, video, and more





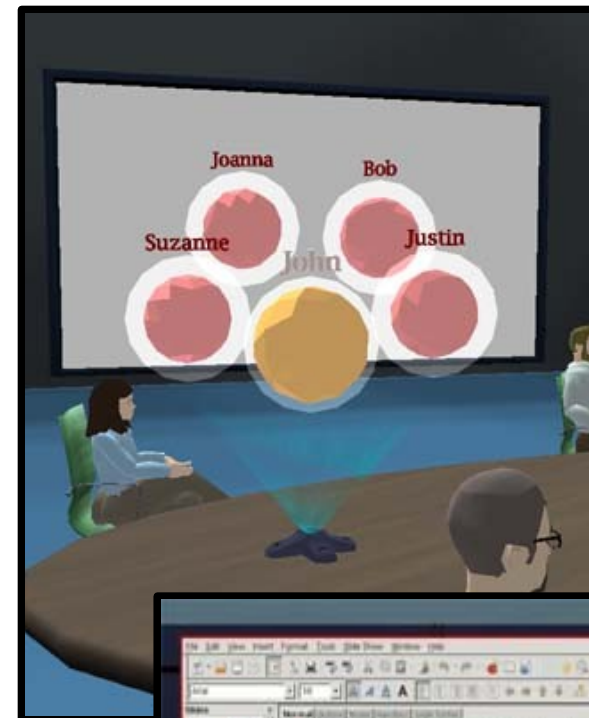
# World of Possibilities

- Significant interest in “enterprise grade” virtual worlds for:
  - > **Internal collaboration**
  - > Distance education
  - > Training / on-boarding
  - > Customer Care
  - > Product demonstrations
  - > Virtual conferences and events
  - > Shared simulation
  - > **Remote monitoring/control**



# Project Wonderland Differentiators

- **End-to-end Solution**
- Live application sharing
- Internal or external deployment
- Open and extensible
  - > 100% Java
  - > Open source, open art path
- Integration with business/web data
- Extensive telephony integration
- Audio as core feature
- Project Darkstar scalability



# MPK20 – Sun's Virtual Workplace



# Live, Shared Documents





# Audio & Telephony

- Audio Features
  - > Mix recorded and live audio
  - > Range of audio fidelities
  - > Individual volume control
  - > Audio recording
  - > Virtual microphone
  - > Cone-of-silence
- Telephone Features
  - > Incoming and outgoing calls
  - > Migrate from VoIP to PBX
  - > Carry telephone users around





# Mixed Reality Conferencing



# Sun's Virtual World Software Stack

Worlds

**MPK20, Music in Wonderland, 6<sup>th</sup> Space, MiRTLE, ...**

- Worlds customized for different audiences
- Includes applications for sharing and collaboration

Client

**Project Wonderland**

Open source Java 3D-based graphics engine  
Manages world, animation, and avatars  
Supports app sharing (initially Java and X apps)  
Extensible and customizable worlds

Software  
Phone

*World  
repository*

Sun  
Directory  
Server

Server

**Project Darkstar**

- Open source communication and app framework
- Highly scalable
- Handles persistence
- Allows extensible set of core services

jVoice  
Bridge

Sun Glassfish ESB

Sun Glassfish  
ApplicationServer

Sun Solaris 10

# Applications: 6thSpace - Malden Labs



# 6<sup>th</sup> Space™

REAL BUSINESS. REAL WORK. VIRTUALLY.






# A Google Product



A simplified representation of a Google search interface. It consists of a large rectangular frame. Inside the frame, at the top, is a horizontal text input field. To the right of the input field is a rectangular button labeled "Find".

# A Typical Business App



The image shows a typical business application interface, overlaid with a large red prohibition sign (a circle with a diagonal line through it). The interface consists of the following elements:

- Input Fields:**
  - FIRST NAME:
  - LAST NAME:
  - SSN:
  - ID:
  - PHONE 1:
  - PHONE 2:    ☐
  - ADDR 1:
  - ACCT #:
  - TYPE CD:
  - TQP STAT: ☐ ☐
  - VER:
  - CAT CD:
  - CITY:
  - STATE:
  - ZIP:
  - ORD #: ☐ ☐ ☐ ☐ ☐
- Form Elements:**
  - FT/PT: ☐
  - A vertical list of codes: 4-K, AA2-, DK9B, KKA7, CN3, AA-9. The code DK9B is highlighted.
  - Buttons: NEW, DEL.
- Navigation/Action Buttons:**
  - OKAY, APPLY, SAVE, UNDO, HELP, DELETE, EDIT (top row)
  - SELECT, BROWSE, ERRORS (bottom row)

# We Believe Business Computing Should Be

Reasonable

Immersive

Pervasive

Proven  
Deployment and  
Adoption Model

Enterprise  
Class

## And Deployed on a Scalable Platform



# PROJECT2

[Project Queue](#)
[Collaborate](#)


**Financial Impact: Hurricane**



**Managing Director**  
 Jackie Doe Online  
 123-234-3456 mobile  
 jdoe@company.com



**Team Members**

Thom Anderson	Mobile
Stephen Laifer	Offline
Martin Walls	Offline
Nicole Miller	Online

**Project Details**

Project Name:	Platform #2
Project Location:	
Final Review Date:	10/31/07
Project Cost to Date:	\$3,210,875
Project Value:	\$103,455,640
Completion Date:	12/21/07

**Schedule**

**Schedule Highlights**

- 1: Helo Pad Lighting Fixtures on-site
- 2: Freight Elevator Assemblies installed
- 3: Upcoming Expenses \$147,500.00
- 4: Weekly Expenditure Rate \$124,879.00
- 5: Monthly Expenditure Avg \$145,789.00

[View Schedule](#)

**Financial**

**Financial Highlights**

**Operational Emergency**

- All construction halted.
- All personnel evacuated.
- All shipments suspended.

**3D Model**

[Enter 3D Virtual World](#)

**Sustainability** Phase [Plan](#)

\$ millions		Customize View	
Carbon Unit (CU)		Variance	
CU Build	1,500	1,500	0
CU Cumulative Run	15,000	18,000	3,000
CU Total	16,800	19,800	3,000
Market Value	\$800	\$875	\$75
Component Value	\$50	\$70	\$20


[Communication](#)
[Preferences](#)
[Collaborate](#)

23:10:31 - Thursday, 31 July 2008





# PROJECT2

[Project Queue](#)
[Collaborate](#)


**Financial Impact: Hurricane**


**Managing Director**  
 Jackie Doe Online  
 123-234-3456 mobile  
 jdoe@company.com


**Team Members**

Thom Anderson	Mobile
Stephen Laifer	Offline
Martin Walls	Offline
Nicole Miller	Online


**Schedule**

**Schedule Highlights**

- 1: Helo Pad Lighting Fixtures on-site
- 2: Freight Elevator Assemblies installed
- 3: Upcoming Expenses \$147,500.00
- 4: Weekly Expenditure Rate \$124,879.00
- 5: Monthly Expenditure Avg \$145,789.00

[View Schedule](#)

**Collaboration Request**

**Team Members**

<input checked="" type="checkbox"/>	Thom Anderson	Title	Mobile
<input type="checkbox"/>	Stephen Laifer	Title	Offline
<input type="checkbox"/>	Martin Walls	Title	Offline
<input checked="" type="checkbox"/>	Nicole Miller	Title	Online

[Add More People](#)
[Send Request](#)

Project Name: Platform #2
 Project Location:
 Final Review Date: 10/31/07
 Project Cost to Date: \$3,210,875
 Project Value: \$103,455,640
 Completion Date: 12/21/07


**3D Model**

[Enter 3D Virtual World](#)


**Sustainability**

Phase [Plan](#)

\$ millions		Customize View	
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CU Total	16,800	19,800	3,000
Market Value	\$800	\$875	\$75
Component Value	\$50	\$70	\$20

[Calculate](#)
[Save](#)
[Clear](#)


[Communication](#)
[Preferences](#)
[Collaborate](#)

23:10:44 - Thursday, 31 July 2008
 



# PROJECT2

Project Queue

Financial Impact: Hurricane Katrina



Managing Director  
Jackie Doe  
123-234-3456 mobile  
jdoe@company.com  
Online



Team Members

Thom Anderson	Mobile
Stephen Laifer	Offline
Martin Walls	Offline
Nicole Miller	Online

### Schedule

**Schedule Highlights**

- 1: Helo Pad Lighting Fixtures on-site
- 2: Freight Elevator Assemblies installed
- 3: Upcoming Expenses \$147,500.00
- 4: Weekly Expenditure Rate \$124,879.00
- 5: Monthly Expenditure Avg \$145,789.00

View Schedule

### Financial

**Financial Highlights**

Operational Emergency

- All construction halted.
- All personnel evacuated.
- All shipments suspended.

Project Names: Platform #1

Project Location:

Final Review Date: 10/31/07

Project Cost to Date: \$3,210,875

Project Value: \$103,455,640

Completion Date: 12/21/07

### 3D Model



Enter 3D Virtual World

### Sustainability

Phase: On

\$ millions		Customize View	
Carbon Unit (CU)			Variance
CU Build	1,500	1,500	0
CU Cumulative Run	15,000	18,000	3,000
CU Total	16,800	19,800	3,000
Market Value	\$800	\$875	\$75
Component Value	\$50	\$70	\$20

Calculate

Save

Clear



 Communication
 

 Preferences
 

 Collaborate

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+











New York

London

Tokyo

Paris

### Repair Parts

MODEL

## ICS/ICS-F

Effective September, 2008

Impeller Reference Chart	
Part No.	Diameter
25400	5.0
25401	5.5
25402	6.0
25403	6.5
25404	7.0
25405	7.5
25406	8.0
25407	8.5
25408	9.0
25409	9.5
25410	10.0
25411	10.5
25412	11.0
25413	11.5
25414	12.0
25415	12.5
25416	13.0
25417	13.5
25418	14.0
25419	14.5
25420	15.0
25421	15.5
25422	16.0
25423	16.5
25424	17.0
25425	17.5
25426	18.0
25427	18.5
25428	19.0
25429	19.5
25430	20.0
25431	20.5
25432	21.0
25433	21.5
25434	22.0
25435	22.5
25436	23.0
25437	23.5
25438	24.0
25439	24.5
25440	25.0
25441	25.5
25442	26.0
25443	26.5
25444	27.0
25445	27.5
25446	28.0
25447	28.5
25448	29.0
25449	29.5
25450	30.0
25451	30.5
25452	31.0
25453	31.5
25454	32.0
25455	32.5
25456	33.0
25457	33.5
25458	34.0
25459	34.5
25460	35.0
25461	35.5
25462	36.0
25463	36.5
25464	37.0
25465	37.5
25466	38.0
25467	38.5
25468	39.0
25469	39.5
25470	40.0
25471	40.5
25472	41.0
25473	41.5
25474	42.0
25475	42.5
25476	43.0
25477	43.5
25478	44.0
25479	44.5
25480	45.0
25481	45.5
25482	46.0
25483	46.5
25484	47.0
25485	47.5
25486	48.0
25487	48.5
25488	49.0
25489	49.5
25490	50.0
25491	50.5
25492	51.0
25493	51.5
25494	52.0
25495	52.5
25496	53.0
25497	53.5
25498	54.0
25499	54.5
25500	55.0
25501	55.5
25502	56.0
25503	56.5
25504	57.0
25505	57.5
25506	58.0
25507	58.5
25508	59.0
25509	59.5
25510	60.0
25511	60.5
25512	61.0
25513	61.5
25514	62.0
25515	62.5
25516	63.0
25517	63.5
25518	64.0
25519	64.5
25520	65.0
25521	65.5
25522	66.0
25523	66.5
25524	67.0
25525	67.5
25526	68.0
25527	68.5
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25529	69.5
25530	70.0
25531	70.5
25532	71.0
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25534	72.0
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25550	80.0
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25554	82.0
25555	82.5
25556	83.0
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25558	84.0
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25561	85.5
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25563	86.5
25564	87.0
25565	87.5
25566	88.0
25567	88.5
25568	89.0
25569	89.5
25570	90.0
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25573	91.5
25574	92.0
25575	92.5
25576	93.0
25577	93.5
25578	94.0
25579	94.5
25580	95.0
25581	95.5
25582	96.0
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25587	98.5
25588	99.0
25589	99.5
25590	100.0
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25592	101.0
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25594	102.0
25595	102.5
25596	103.0
25597	103.5
25598	104.0
25599	104.5
25600	105.0
25601	105.5
25602	106.0
25603	106.5
25604	107.0
25605	107.5
25606	108.0
25607	108.5
25608	109.0
25609	109.5
25610	110.0
25611	110.5
25612	111.0
25613	111.5
25614	112.0
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25631	120.5
25632	121.0
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25637	123.5
25638	124.0
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25640	125.0
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25643	126.5
25644	127.0
25645	127.5
25646	128.0
25647	128.5
25648	129.0
25649	129.5
25650	130.0
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25652	131.0
25653	131.5
25654	132.0
25655	132.5
25656	133.0
25657	133.5
25658	134.0
25659	134.5
25660	135.0
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25662	136.0
25663	136.5
25664	137.0
25665	137.5
25666	138.0
25667	138.5
25668	139.0
25669	139.5
25670	140.0
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25672	141.0
25673	141.5
25674	142.0
25675	142.5
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25677	143.5
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25679	144.5
25680	145.0
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25683	146.5
25684	147.0
25685	147.5
25686	148.0
25687	148.5
25688	149.0
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25691	150.5
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25693	151.5
25694	152.0
25695	152.5
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25697	153.5
25698	154.0
25699	154.5
25700	155.0
25701	155.5
25702	156.0
25703	156.5
25704	157.0
25705	157.5
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25707	158.5
25708	159.0
25709	159.5
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25749	179.5
25750	180.0
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25767	188.5
25768	189.0
25769	189.5
25770	190.0
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25774	192.0
25775	192.5
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25781	195.5
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25785	197.5
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25787	198.5
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25790	200.0
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25793	201.5
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25795	202.5
25796	203.0
25797	203.5
25798	204.0
25799	204.5
25800	205.0
25801	205.5
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25804	207.0
25805	207.5
25806	208.0
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25808	209.0
25809	209.5
25810	210.0
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25812	211.0
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25817	213.5
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25839	224.5
25840	225.0
25841	225.5
25842	226.0
25843	226.5
25844	227.0
25845	227.5
25846	228.0
25847	228.5
25848	229.0
25849	229.5
25850	230.0
25851	230.5
25852	231.0
25853	231.5
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25855	232.5
25856	233.0
25857	233.5
25858	234.0
25859	234.5
25860	235.0
25861	235.5
25862	236.0
25863	236.5
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25866	238.0
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25869	239.5
25870	240.0
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25873	241.5
25874	242.0
25875	242.5
25876	243.0
25877	243.5
25878	244.0
25879	244.5
25880	245.0
25881	245.5
25882	246.0
25883	246.5
25884	247.0
25885	247.5
25886	248.0
25887	248.5
25888	249.0
25889	249.5
25890	250.0
25891	250.5
25892	251.0





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*Software & Java Ambassador*

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