Réalité Augmentée
et
Applications Culturelles:
Petit point d'histoire

Atelier 11: Réalité Augmentée

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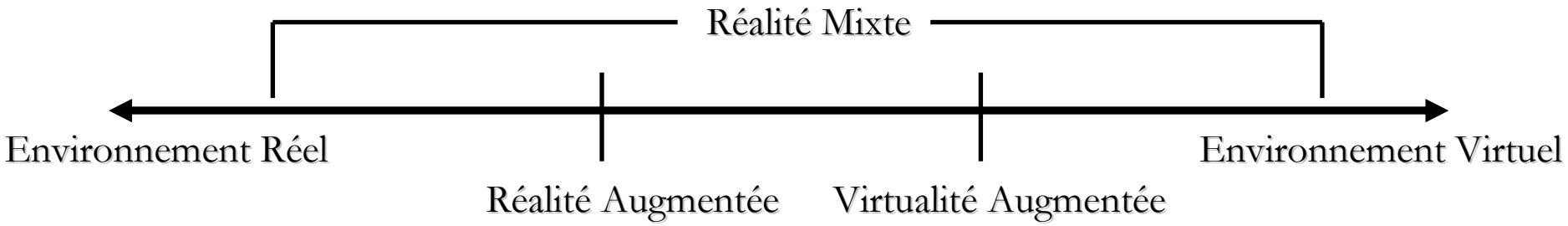
1. Réalité Augmentée: Définition



[Milgram and Kishino, 1994]

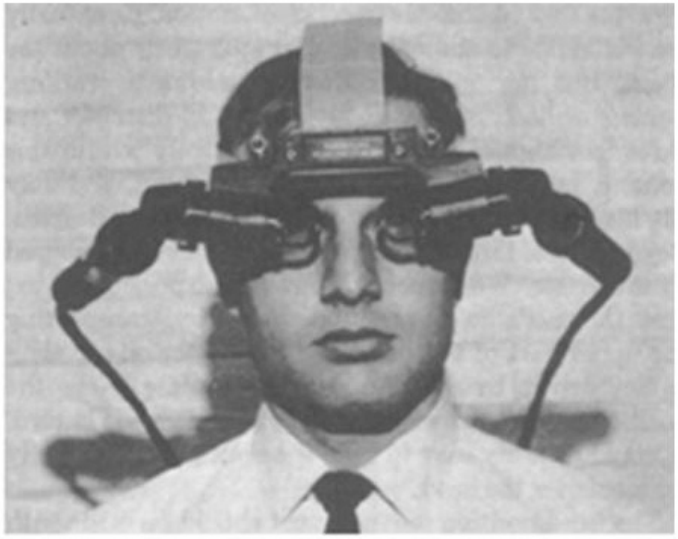
Une application de Réalité Augmentée doit:

- combiner le réel et le virtuel **[Azuma, 1997]**
- être interactive en temps réel
- effectuer un recalage entre le réel et le virtuel

Architecture d'un système de RA:

- Une caméra filmant la scène visionnée par l'utilisateur
- Un ordinateur générant les entités virtuelles
- Des dispositifs d'entrée et de présentation d'information
- Des capteurs de la position de l'utilisateur et des objets de l'environnement réel

1968: The Ultimate Display



[Sutherland, 1968]

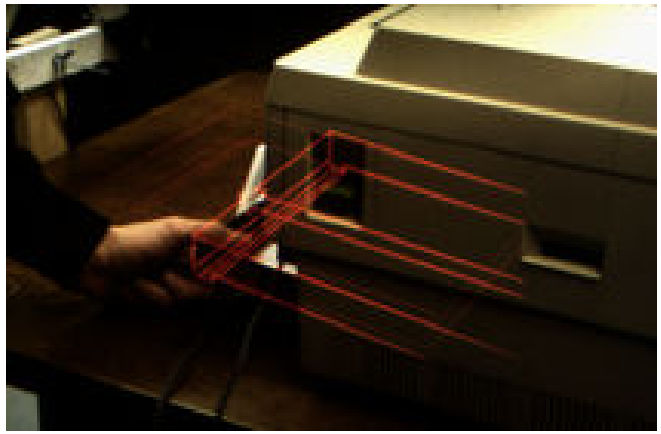
2. Réalité Augmentée (RA): Domaines d'application

Aide à la décision, l'assistance et le guidage pour des domaines variés:

- Architecture
- Industrie
- Tourisme
- Médecine
- Enseignement

3. Applications de RA: Exemples

[Funamizu, 2007]



[Feiner et al., 1993]

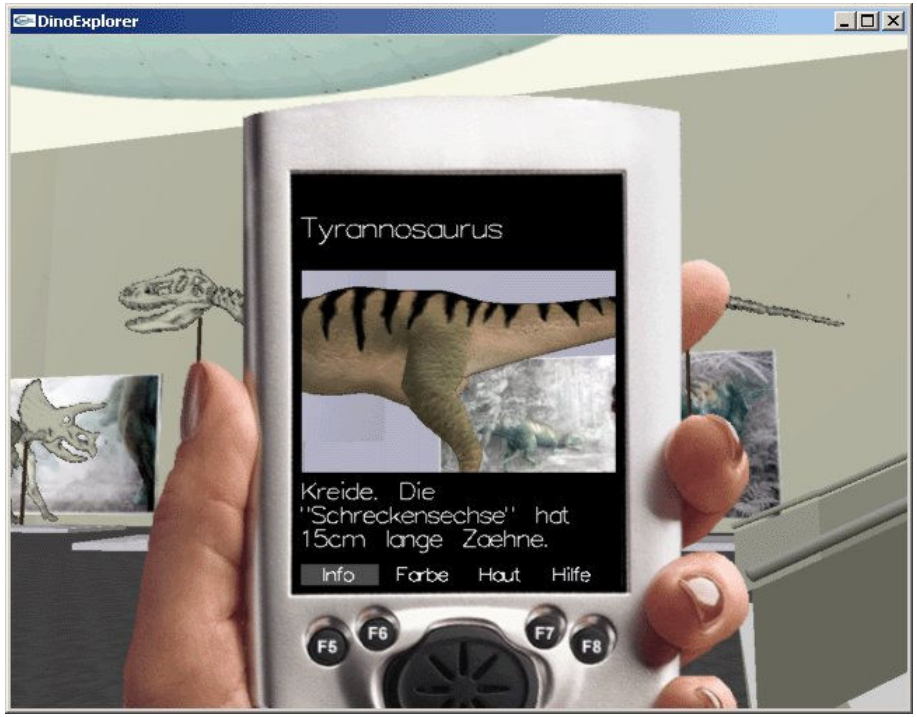
3. Applications de RA: Exemples

Human Pac-Man

[Cheok, 2003]

4. RA et Patrimoine Culturel: Quelques réflexions…

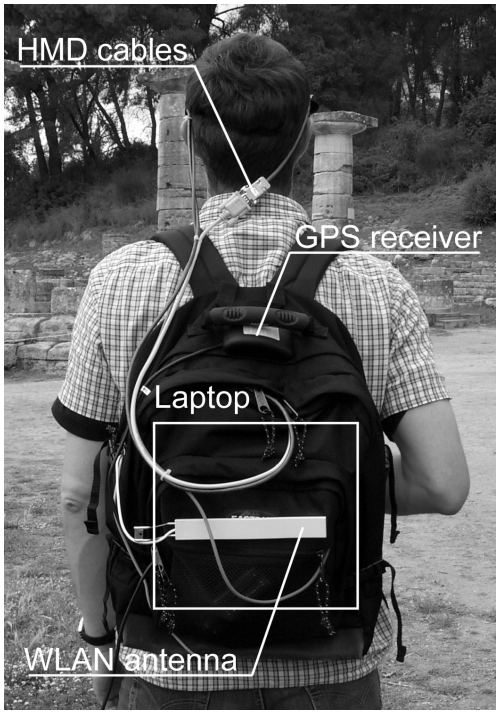
- RA: une technologie émergeante
- en quête d'idées pour des nouveaux usages
- s'adresse à un public spécialisé
- appropriation par un public varié



[Dinohunter, 2004]

5. RA et Patrimoine Culturel: applications «outdoor»

Ancienne Olympie, projet ARCHEOGUIDE, 2001

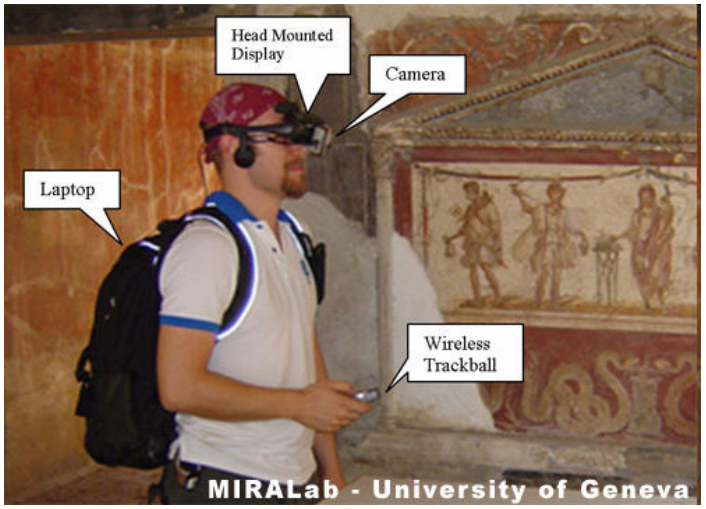


[Vlahakis et al., 2002]

[Gleue and Daehne, 2001]

5. RA et Patrimoine Culturel: applications «outdoor»

Pompéi, projet LIFEPLUS, 2002-2004



[LIFEPLUS, 2004]

6. RA et Patrimoine Culturel: installations fixes

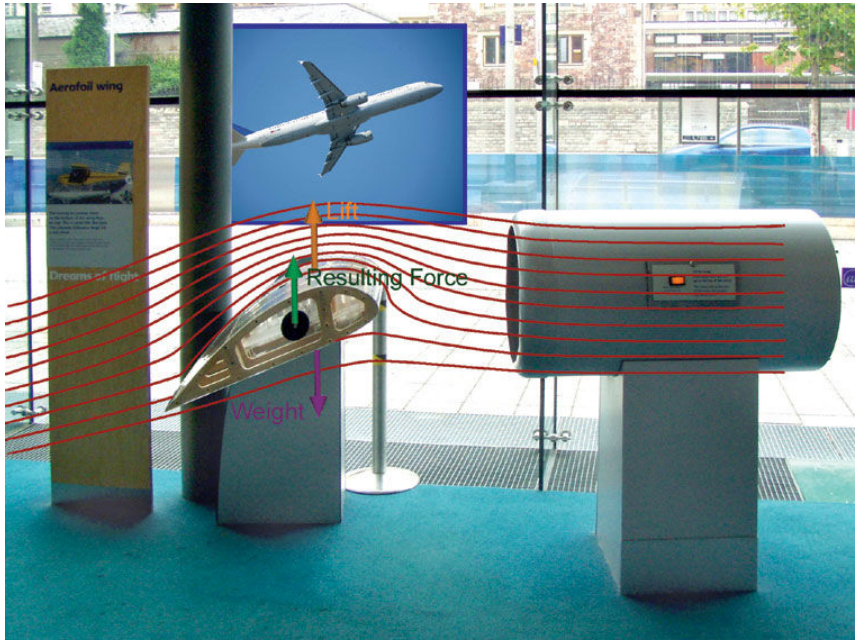
[Wendler and Frohlich, 2005]

[Ename 974]

[Y-Dreams]

7. RA et Patrimoine Culturel: applications «indoor»

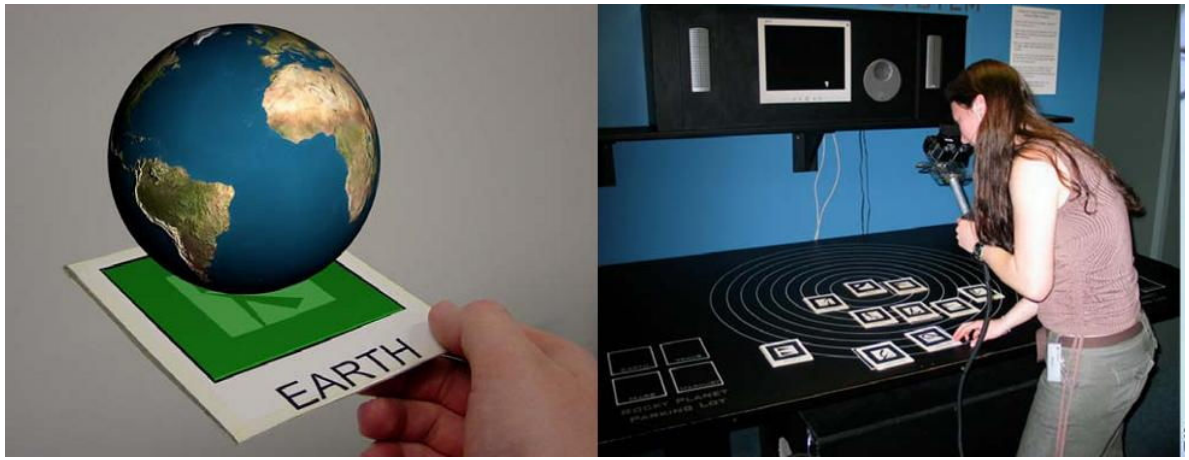
Projet ECSITE-CONNECT, 2002-2004



[connect-ecsite, 2005]

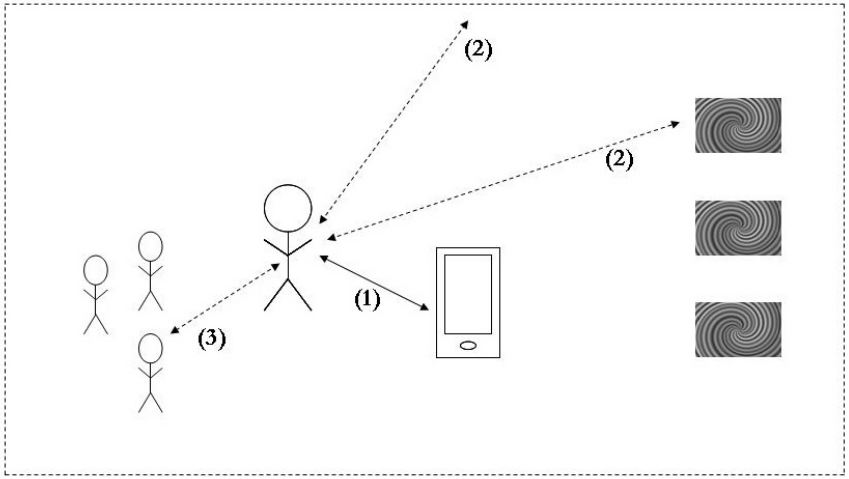
8. RA et Patrimoine Culturel: applications «indoor»

Centre de Sciences Te Manawa, Nouvelle Zéland, 2004



[Woods et al., 2004]

9. RA et Guides Multimédia Portables pour la Visite Culturelle



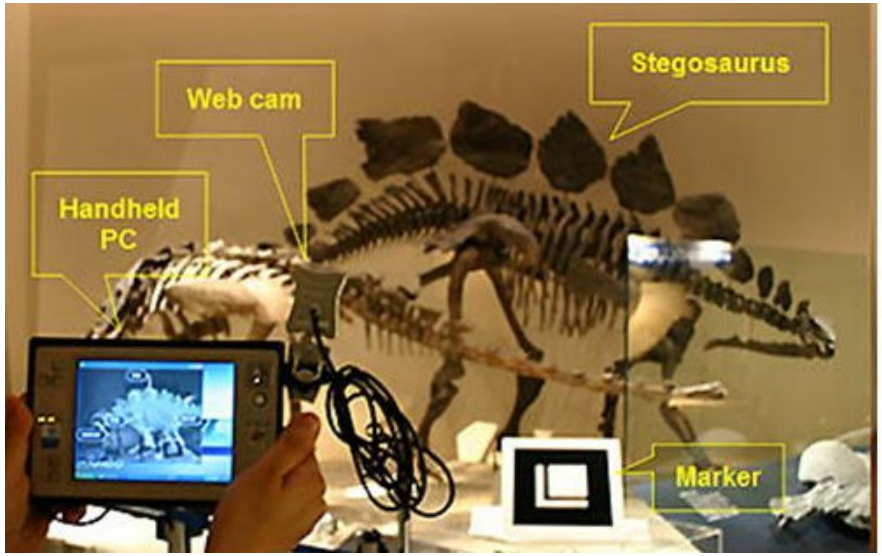
[Damala, 2009]

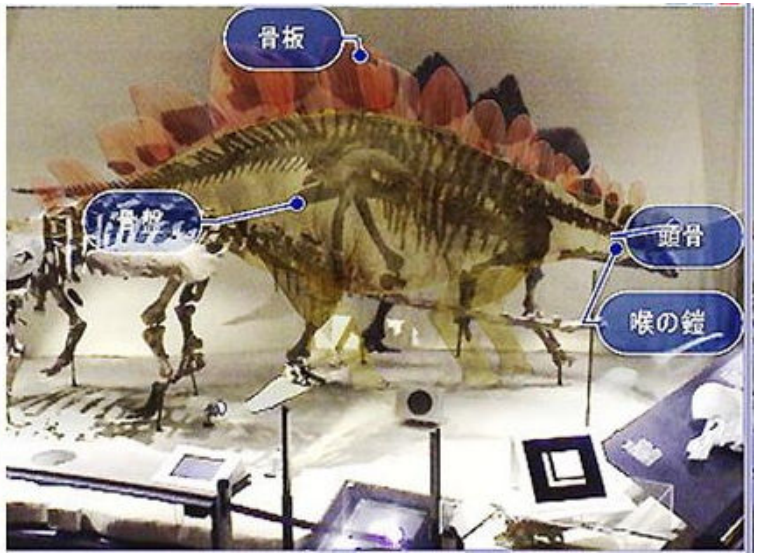
[Damala et al., 2008]

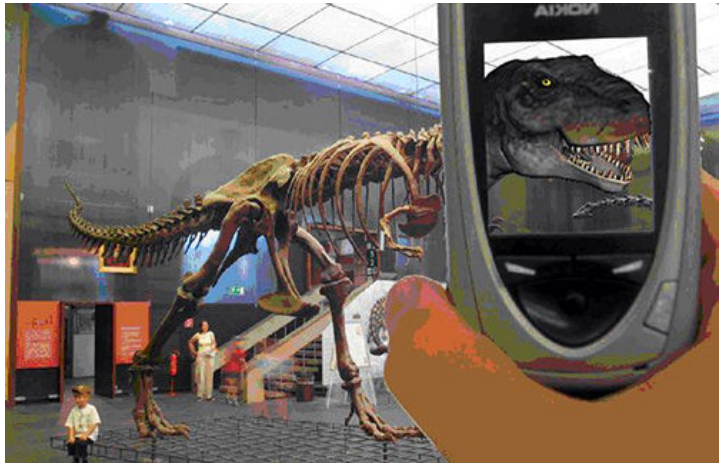
[Damala and LeCoq, 2005]

9. RA et Guides mobiles pour la visite culturelle

Musée d'Histoire Naturelle, Tokyo, Japon, 2007







[Kiyokawa, 2007]

[Louvre DNP museum lab, 2008, http://museumlab.jp]

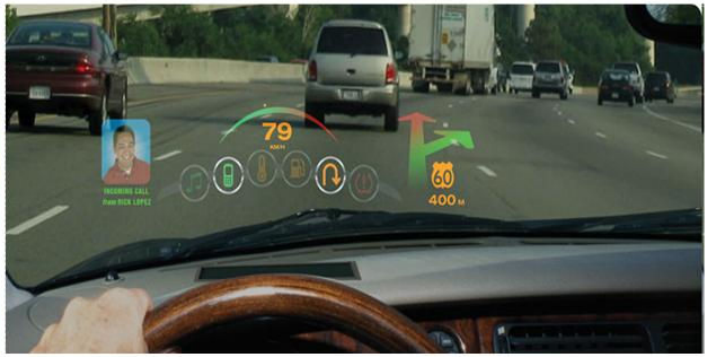
11. RA et applications culturelles en France

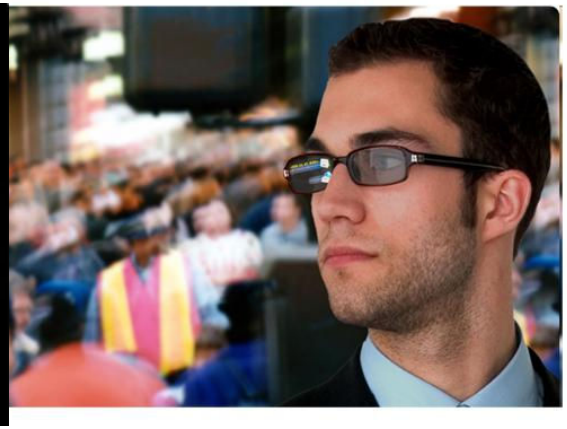
- CultureClic [http://www.cultureclic.fr/]
- GAMME [http://anr-gamme.gforge.inria.fr/presentation.htm]
- Jardins de Versaille [http://www.chateauversailles.fr/application-iphone]
- ZeVisit [http://www.facebook.com/Zevisit]

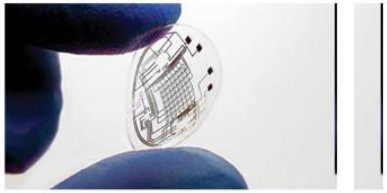
[CultureClic]

[Jardins de Versailles]

10. Dispositifs de RA: Présent - Futur







Dispositifs de RA: loupe de RA [Greene 2008], pare-brise de RA "microvision" [Microvision], console Nintendo DS, i-phone, lunettes semi-transparents de "microvision" [Microvision], lentille de contact de RA, Université de Washington..

RA et Patrimoine Culturel: En guise de conclusion

- peu de normes et conclusions généralisantes en termes d'interaction et de navigation
- surcharge mentale
- mise en place des nouveaux scénographies et narratives ?
- dans le respect de l'unicité du regard que chaque visiteur porte sur un objet culturel

Questions ?

Ressources et Bibliographie

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