Call it outsourcing, offshoring, or sharing the pain: it’s global usability work
Terms (just to get to common ground…)

- HCI / CHI = Human – computer interaction
- UCD = User centered design *
- UI = User interface
- Usability ≠ UI design
- Usability ≠ usability testing

- Internationalization = designing, enabling, and coding the product accounting for cultural, environmental, and individual differences.¹
- Localization = translation of the product (in the software industry, this includes the software product, its help, and documentation). ¹
- Globalization = internalization + localization ¹

* A process aiming to ensure the development of a system that is usable and supports user’s needs, actions, thinking and organization. (Jarmo Palviainen)

¹ [Coronado & Livermore 2001]
Trends, anecdotes and research results identified in the HCI community

- **Outsourcing, GSD & OSS** call for *remote usability testing* [Andreasen et al 2007]
  - Remote synchronous usability testing about as effective and efficient as normal
  - Remote testing & remote customer req. gathering sessions nowadays supported by tools [Rosenberg & Gajendar 2005]
- Earlier only smaller tasks and responsibilities were offshored, e.g. Y2K, now end-to-end solutions [Chauhan 2006]
- E-business systems, global shared databases etc. located & operated in lower cost areas, used all over the world [Rosenberg & Gajendar 2005]
- "Huge" growth in India and in China
  - Yet only ~100 professionals in China [Chauhan 2006]
  - Difficulties in finding staff
Number of HCI people in India rising [Chauhan 2006]

<table>
<thead>
<tr>
<th>Organization</th>
<th>2000</th>
<th>2005</th>
<th>2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honeywell</td>
<td>5</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>Veritas</td>
<td>1</td>
<td>25</td>
<td>NA</td>
</tr>
<tr>
<td>Quark</td>
<td>4-5</td>
<td>15</td>
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</tr>
<tr>
<td>Microsoft</td>
<td>3</td>
<td>5</td>
<td>NA</td>
</tr>
<tr>
<td>Oracle</td>
<td>2-3</td>
<td>10-15</td>
<td>NA</td>
</tr>
<tr>
<td>Infosys</td>
<td>NA</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>HFI</td>
<td>10</td>
<td>85</td>
<td>300</td>
</tr>
</tbody>
</table>

*Internal Projections

Figure 1: Number of usability professionals in India as indicated by internal research. Note: All figures and years are indicative and not exact.

Figure 2: Approximate number of usability professionals per department in India as indicated by internal research. Note: All figures and years are indicative and not exact.
Reasons to go global in HCI [Plocher 2006]

• Positioning a lab
  - close to world-class talent (typically university) (e.g. HP)
  - Close to a large future market (Nokia, Motorola)

• Reducing costs
Other reasons to go global

- I argue that going to a different culture demands always at least some usability work to avoid risks
  - At minimum you need to do some usability testing and interviews to understand the users and see if they understand and accept the product
  - If the system is complex and the cultural distance is great, consider involving users from the target culture already in the early phases of product development
- Target cultures language and its language associated issues (character set, sorting etc.) are often well considered. Deeper levels of culture such as factors pertaining to values and rituals are often omitted [Yeo 2001]

Hint: read Hofstede to get a good idea of differences between cultures
"Going global with the Product Design Process" [Coronado & Livermore 2001]

- UCD Group & Localization Group (mid 1990s), later both under Development Services
- Evangelizing about internationalization for product groups
  - Globalization: bonus compensation structure for product groups
  - Visits overseas
  - International task analysis sessions
  - Japanese company as a development partner in alpha & beta phases
…Going global: Lessons learned

• Don’t choose the cheapest way to do the localization
  - Trusted vendors, who know your products (not breaking the sw) and also competitors (=consistent translations)
  - In house resources used for reviewing and testing after translation

• Localization Process
  - Actual project manager (contact person for vendors)

• International req. gathering & usability engineering
  - task analysis, interviews, focus groups, usability testing
  - Usability activities in Singapore, Hong Kong, France, Sweden, Germany, UK, Canada and USA

• Kick-off, managed by the Development Services
Cost of an Expert Review (ten business days real-time) [Schaffer 2006]

<table>
<thead>
<tr>
<th></th>
<th>Onshore</th>
<th>Blending in Offshore</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Project Director (local) – 10 days:</td>
<td>Project Director (local) – 2 days:</td>
</tr>
<tr>
<td></td>
<td>$2,000 per day = $20,000</td>
<td>$2,000 per day = $4,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lead (offshore) – 3 days: $700 per</td>
</tr>
<tr>
<td></td>
<td></td>
<td>day = $2,100</td>
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<tr>
<td></td>
<td></td>
<td>Sr. Specialist (offshore) – 9 days:</td>
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<tr>
<td></td>
<td></td>
<td>$600 per day = $5,400</td>
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<tr>
<td></td>
<td></td>
<td>Total Cost $20,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total Cost $11,500</td>
</tr>
</tbody>
</table>
Profile of an offshore HCI professional

“The ideal candidate will have three or more years of experience in usability engineering, including user analysis, interface design, and usability testing. Experience in usability work for commercial applications (Internet, Intranet, back office, products) is a must, as is consulting experience and/or training experience in corporate settings. A graduate degree in psychology (human factors, cognitive, engineering or experimental) or a field related to human-computer interaction is preferred.

“S/he must be able to carry out usability work under a director, produce excellent written deliverables, and communicate clearly with the client. S/he will be asked to perform the entire range of usability work. S/he will have extensive interactions with clients, so the candidate must have excellent interpersonal skills, be sensitive to the client’s needs, and be able to give small group presentations. Projects may include teams from remote offices, so the individual must have the ability to communicate and work remotely.”
### Salaries...

UK/US against the lower cost areas: 26-2 manyears with the same $

[Schaffer 2006]

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual salary in US dollars</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>$12,000 to $24,000</td>
<td></td>
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<tr>
<td>China</td>
<td>$30,000 to $42,000</td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>$24,000 to $36,000</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>$40,000 to $45,000</td>
<td>“HCI at the moment is taught much more in computer science degrees rather than psychology degrees, so people involved in usability have very often a computer science degree.”</td>
</tr>
<tr>
<td>Israel</td>
<td>$36,000 to $60,000</td>
<td>“People doing this are HCI specialists with an IT background (very few), psychologists (few and with little focus on UI), and quality auditors (with little focus on HCI).”</td>
</tr>
<tr>
<td>Romania</td>
<td>$3,600 to $18,000</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>$18,000 to $30,000</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>$30,000 to $36,000</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>$24,000 to $130,000</td>
<td>“There are very few usability practitioners in South Africa and of those few, the majority are in-house people and most are academics. There can’t be more than four or five full-time practitioners in private industry and of them, probably only two have proper HCI qualifications.”</td>
</tr>
<tr>
<td>South Korea</td>
<td>$50,000</td>
<td></td>
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<tr>
<td>United Kingdom</td>
<td>$36,000 to $95,000</td>
<td></td>
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<tr>
<td>United States</td>
<td>$80,000 to $86,000</td>
<td></td>
</tr>
</tbody>
</table>
When not to offshore [Schaffer 2006]

- Immature usability (non systematic…)
- Very short projects (few days)
  - For straightforward work even few days is OK
  - For complex work, allow a couple of weeks for the staff to understand the situation
- Need for a lot of interpersonal interaction
- High security (e.g. military)(e.g. corruption)
- Extreme criticality (no delays…)
Benefits

• 24h working day by using time differences btw groups -> more iterations [Rosenberg & Gajendar 2005]
• Understanding local culture
  - Systems should not be only 'localized', but designed with local people
Possible problems
[Rosenberg & Gajendar 2005]

• Misinterpretation
• a sense of detachment from the process
• cultural misunderstanding of design necessities
• the challenge of shepherding the UCD process from the other side of the world
... problems [Burmistrov 2006]

- Absence of direct visibility of the offshore work
  - Customer feels the insufficiency of supervision
    -> demand of daily reports
    -> excess nonproductive work
    -> mistrust & micromanagement
Case India [Chauhan 2006]

“The future looks good. It is ingrained in the Indian system to think about the other person first. In the Indian culture, it is truly UI—You before I. With proper training and education, India has what it takes.”

- "Quality of designers (≈usability specialists) not sufficient": education concentrates on design issues, no research methods taught
- University level education just developing
- Demand-supply gap for qualified HCI people
- Do not assume that this applies to other professions (call center case [Rosenberg & Gajendar 2005])
Case Honeywell in China [Plocher 2006]

- Close relationship to a local professor
- Students as interns in USA
- Honeywell engineers work in a site in the university some amount of their time
- ”China lab provides a window to china market”
- Working as members of global project teams
- Cost effectiveness (”Technical progress at least doubled without exceeding budget)
- ”24h –development”
Tips for working with HCI-people in China [Plocher 2006], [Zhao 2006]

- Chinese society is based on relationships
  - Building them takes time
  - Be trustworthy
  - Introduce them to your colleagues in other parts of the world – you’ll be appreciated for your connections

- Not arguing ≠ they agree
  - Arguing with the e-mail

- Bring China-lab members to your USA for some weeks
  - Helps also with previous challenge
  - Learning about company research culture, processes & practices

- Modest goals
  - Weekly reporting
…tips

• Strong collaboration with senior labs
• Visiting key personnel bringing new research trends, technologies, understanding of state of the art
• Almost weekly morning/night conference calls
  - Both face-to-face (=>trust&relationship) and conference calls are needed
• Value their intellect
  - Brainstorming with them
  - Share the credits
• Awareness of the changes in Chinese culture
  - Young chinese vs. older ones…
Main lessons learned

- Cheaper labour one of main motivations, just as in GSD in general
- Number of professionals in the field significantly smaller than in SD in general
- Importance of communication (is this a surprise?
  - Blending people, face to face meetings, trust
  - ”Travel is not necessary for detailed design” [Schaffer 2006]
Questions:

1. How to organize?

- From earlier presentation:
  - Reducing coordination risks:
    - Adjust organization model: functional, project based, product structure based, development process based
Questions 2:

• Should the usability functions/activities be the first thing to be offshored – you could benefit from the strengths of this particular profession? (sensitiveness to communication and cultural issues, ability to observe and understand different cultures)
References


References

As special issue: ACM Interactions, March+April 2006

- [Plocher 2006] Plocher, T., Working with a Global Lab Team in China. 18-19
- [Schaffer 2006] Schaffer, E., A Decision Table: Offshore or Not? (When NOT to Use Offshore Resources), pp. 32-33