

## Chapter 83

# Technological Innovation and Use in the Early Days of Camera Phone Photo Messaging

Jonathan Lillie  
Loyola University, USA

### ABSTRACT

*This chapter reviews user studies to look at the early era (roughly 2001-2007) of camera phone and MMS (multimedia messaging services) use. It then considers the role played by one of the main regional and global industry actors (Nokia) in shaping the technology and then responding to user trends and innovation. The studies reviewed show that early camera phone users embraced this technology as a significantly enhanced form of the portable analog camera, as opposed to being more enthralled with photo messaging as industry players like Nokia had hoped. The chapter concludes by arguing that technological innovation and use are impacted by many factors besides industrial design and marketing.*

### INTRODUCTION

The introduction of picture taking and messaging capabilities to mobile phones is one of the four most significant and impactful innovations that mobile phones in general have offered to humanity in the last 25 years; the others being mobile telephony, text messaging, and mobile Internet access/services. Of course in making such a claim, one quickly runs into a morass of classification. After all, many mobile Internet behaviors are based in part on image sharing practices; and image sending piggybacks somewhat on the older texting platforms, both in terms of technology and behavior. The journey of camera phone use and image messaging – from early designs and strategies of phone manufactures to the wide diversity of practices that are observable today – is a classic example of technological innovation. And by “classic” I mean that innovation tends to never cease, especially with those technologies that are built on flexible platforms, or else where manufacturers have incentive to continually change the technology based on user innovation and practices. Such was the case when Nokia, and other handset companies, changed strategies (at least in part) after early user studies demonstrated that early camera phone adopters had

DOI: 10.4018/978-1-5225-7598-6.ch083

different practices in mind than the companies did. Since that time, the innovation in mobile imaging practices has mostly been in the hands of user groups and social media companies.

This chapter presents a sketch of the early days of camera phone and MMS use. Since the main goal of the chapter is to review relevant literature, it does not address the contexts of camera phone use for any specific user group or region in any depth. However, rather than merely presenting the findings of the many excellent studies of camera phone users in the early and mid-2000s, I hope to also complement these studies, in part, by showing the role played by one of the main regional and global industry actors (Nokia) in shaping the technology and then responding to user trends and innovation. In the book *Everyday Innovators* (2004), which is largely devoted to research of user innovation with mobile phones, Alexandre Mallard of the Center for the Sociology of Innovation in Paris concludes that, “where users will behave creatively seems to be quite unpredictable!” (p. 42). Users, he continues, often reproduce the roles proscribed for them by industry, but they can also discover and champion new unintended uses, and enthusiasts can sometimes even alter the hardware or software to essentially change what the technology can be used for. The studies reviewed in this chapter (focusing mostly on European and Asian countries) show that early camera phone users embraced the technology as a significantly enhanced form of the portable analog camera, which had a long history of cultural practice, as opposed to being more enthralled with photo messaging as industry had hoped.

## **BACKGROUND**

### **The Camera Phone and MMS: Industry Innovation and Marketing**

The major mobile phone manufacturers started to market and sell their first camera phones in late 1999/early 2000. Just seven years later the number of camera phones surpassed the one billion mark (Figure 1). But the problem for the industry was not whether people would buy handsets, it was if people would use the new photo messaging features. Nokia along with many other European manufacturers and service providers wanted to create the next “killer app” for mobile technology, and were pushing for that to be a new standard called multimedia messaging service or MMS. Some industry players expected MMS to piggyback on the success of the SMS text-messaging platform. Over the previous decade Nokia had invested heavily in the design of SMS and the cellular platform that made it possible, the Global System for Mobile Communications (GSM). GSM was the second-generation, digital cellular system adopted by most European countries. The company’s success in the 1990s was due in part to its investment in SMS, which resulted in the technology’s seamless integration with its handsets. As is well chronicled in the industry and academic literature, texting boomed in Europe propelled by 1990s youth culture. Though the industry did not anticipate the texting craze, it quickly responded “to capture these new uses and repackage them as fee-producing services” (Snowden, 2006, p. 112). So as the third generation (“3G”) cellular system was being developed to improve GSM with faster connections and enhanced services, Nokia (and other players) ensured that the new standard would include a photo/video messaging service commensurate with its plans for introducing camera phones by the end of the decade.

Nokia bet that new camera phone users would view MMS as SMS 2.0 (Loubser, 2005; Pohjola, O. P. and Kilkki, K., 2005), which they would not mind paying more money for due to the utility of sending and receiving multimedia content (Nokia, 1999). The company’s early market studies focused in on person-to-person and person-to-multiperson picture messaging, since these services were most like

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