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Sound Art in Malaysia from a Malaysian Sound Artist Perspective

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Abstract

Early exploration of the use of computers in Musical Instrument Digital Interface (MIDI), somehow allowed me to venture further into the domain of sound. Nothing much was known or noted in terms of the notion or historical perspectives of electroacoustic music in Malaysia. Unlike in the West, our music industry accommodated Western music, particularly popular music, but not experimental or electroacoustic music. The advancement in computer technology in music applications introduced new creative ideas, and its democratization permitted more creative exploration, technically and aesthetically. This paper is a recollection of the long journey of a Malaysian composer venturing into electroacoustic music.

In 1992 I became interested in experimenting with sounds during my involvement with an experimental music competition run by Universiti Teknologi MARA (UiTM), previously known as Institut Teknologi MARA (ITM). This interdepartmental experimental music competition was organised by the School of Art and Design, inspired by the *Band Tanpa Elektrik* (BTL) meaning 'Non Electric Band', and supervised by a UiTM music lecturer. The BTL ensemble consisted primarily of tuned percussion instruments such as *gambang*, *glockenspiel*, and *boning,* among others.

Later I continued experimenting with sounds at UiTM's gamelan studios, utilizing gamelan instruments as well as a 'detuned' electric guitar. This exploration resulted in the creation of a composition entitled *The Secret of Pentatonic*. Initially the work was arranged with what I would regard as 'intentionally detuned guitar', employing a series of repetitive notes from a popular gamelan piece called *Timang Burung*. However, the piece was deemed unsuitable for performance due to its 'out of tune' character, and was subsequently revised. The final version was premiered during our first music department concert, performed by a group of gamelan performers and electric band, a fusion of traditional musical instruments and western musical ideas.

My interest in experimenting with different musical ideas expanded when I was at York University, England. During the international MediaMix 1996 event, organised by York University's music department, I was exposed to electroacoustic music. Having been selected to work on the event sound team, I was given the opportunity to assist musician-composers such as Stephen Horenstein, Daniel Oppenheim, Jean Claude Risset, David Worrall, Nick Fells, Rajmil Fischman and others. It was during this event that I first observed real-time processing with Max in a performance by

Daniel Oppenheim together with a baritone solo by Stephen Horenstein, presented on the York Ambisonic diffusion system. Other works included *Sud* by Jean Claude Risset; *Warm-Up* by Tim Ward, a solo tuba piece with real-time processing; and an experimental video piece by Tim Kreger, which inspired me towards the idea of an experimental video piece for my final project in late 1996. Most of the pieces presented were composed, presented and processed in real-time, typically with delay, reverse and manipulated pitch. It was also during this event that the journal *Organised Sound* was launched, which marked significant contributions by music and technology enthusiasts - particularly the electroacoustic music community - towards the development of electroacoustic music as a whole.

While studying at York, I was also one of many fortunate enough to witness the launch of Windows 95 by Gates, marking a new era of computer operating systems which have since had a significant impact on the use of computers for creative applications. The operating system has not only changed the way in which individuals work, but also the music industry as a whole. One significant impact was the advancement of MIDI and audio interfaces.

Early Composition

My early exploration of electroacoustic music at the music department electronic studios was predominantly based on the two-track Revox 77 tape machine. Most of my sounds were recorded on either a Sony or Tascam DAT machine and later transferred onto the tape machine for further processing. The processing was mostly executed on Atari computers, running the Composers' Desktop Project (CDP) processing suite through command line, with a soundstreamer as the hardware for the analogue and digital conversion. Processing normally took anywhere from seconds up to 24 hours, depending on the length and complexity of the processing being executed. Most of my early exploration focused on various filtering techniques and reverse, as well as other related aspects.

After MediaMix 96, I became inspired to work in the studio exploring the notion of sounds. Real-time processing compositions such as *Lament of Jerusalem*, performed by Stephen Horenstein and Daniel Oppenheim, an animated video work by Tim Kreger, *Sud* by Jean Claude Risset, a real-time tracking pendulum, and *Chaos Theory* by Tony Myatt, introduced me to new forms of music. Their version of the 'Cagean' approach inspired me to venture deeper into randomly computer-generated rules of pitches, such as the twelve tone row randomizer, as well as sounds and real-time electronic works.

Upon returning from York to Malaysia in late 1996, the newly launched Windows 95, and the rising popularity of the World Wide Web (WWW) were being celebrated. Scanners and converting files were something relatively new. Improvements in computer speed with user friendly interfaces, such as the Windows operating system replacing '486' machines packaged with multimedia interfaces, in addition to the Netscape browser, significantly changed global views about computer networks. Real-time communication protocols such as Internet Relay Chat (IRC) and email have also changed how we communicate.

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Between Analog and Digital Technologies

I was fortunate to be given the opportunity to experience two different approaches in composing with sounds. My early years on Revox tape machines with basic classical tape techniques, such as reverse and delay technique, together with extensive experience on processing techniques on computer platforms, have proved useful and valuable. Unlike in the note domain, composing with sounds involves a depth of understanding about the sound itself, including their properties from a physics point of view. The science of sounds, understanding programming languages, as well as acoustics and psychoacoustics, might sound complicated to a typical music student. However, knowledge of these aspects is fundamental to composing with sounds. Later I discovered that understanding music technology is not merely centered on popular music production, which is largely commercially based, but more importantly, is a highly sophisticated mix between the technical and aesthetical world. Through technological advances, digital technologies have become cheaper, more popular and easier to use, which has increased the opportunities for non-technically trained composers to master many applications.

My return from York was somewhat challenging, as it was not until 1999 that I had the luxury of owning a personal computer allowing me to utilize the software and hardware which I had become acquainted with previously. Music technology is something yet to be fully explored by Malaysians; our views on the subject are bound within a definition of music production, which is merely commercially based. This is not surprising since the Malaysian music industry is commercially driven, with no major approaches in innovation and technical research using the technology itself.

UNIMAS is the eighth public university established in Malaysia, and importantly, the first public university established after Tun Mahathir launched Vision 2020. Additionally, the campaign about the importance of Information Technology (IT) such as Sayang IT, as well as the establishment of the Multimedia Super Corridor (MSC), have demonstrated Malaysia's serious intention of becoming proficient in IT. These developments have democratized technology and subsequently allowed Malaysia to be on a par with the rest of the world, and compete globally in terms of technological advancement. We have experienced a dramatic increase in new creative ideas and technological innovations but not much has been articulated about music and technology, or the arts in general. Most of our ventures have centered on new ideas merely from a user point of view, harnessing readily commercially available technology, including hardware or software, such as the commonly used Musical Instrument Digital Interface (MIDI).

Malaysia's interest in becoming more international was embraced by our present Prime Minister, with his tag line 'global perspectives – local content' or in short, 'glocal'. This inspired young Malaysians in particular to reflect and react. The borderless networks have indeed increased innovative and collaborative possibilities, including several initiatives introduced by the government, particularly one Malaysian creative industry project which focused on creative content itself. In supporting this, the government proposed the *Dana Industri Kreatif* (Creative Industry Fund) amounting to RM200 million, to support the development of local Malaysian creative industries such as film, drama, music, animation, and advertising.

Being in Sarawak, the land of the hornbill, provided me with the inspiration that I needed as an electroacoustic music composer. Its broad native and cross-cultural identity, particularly in music and dance, motivated me towards more creative endeavours. The creative industry being encircled within the Klang Valley does present a challenge, particularly in terms of distribution and creative performances. Therefore the advancement of communication through social communication networks is something one should not simply ignore and which can in fact be advantageous. Popular social networks such as YouTube, for example, have been widely used for uploading self-directed performances and have become increasingly popular forms of promoting creative works.

The use of natural resources or sound sources has been central to most of my compositions. Being in Sarawak gives me the opportunity to explore and experiment with our local sounds. Most of my recording materials centered on anything that was available, either around where I stayed, or something that came naturally from the rainforest, or my field trips to the long houses during my holidays, as well as collaborative research with a local scientist.

Music and Algorithmic Composition

While at York, I became acquainted with 'music and mathematics' during one of my tutorial sessions on *Tabula Vigilans* by Orton. I became increasingly interested in the idea of music and probability rules of algorithmic compositions during my early years tutored by Orton, and after seeing Tony Myatt demonstrate 'chaos theory' on his installation works at the foyer of Sir Jack Lyons Concert Hall, during MediaMix 1996. Tabula Vigilans (TV), or 'Vigilant Table', according to Orton, stemmed from the idea of controlling the parameter series of musical data, and constituted two parts: A chunk of data which can be systematized as an array of cells containing musical data, as well as the rules which regulate them. In TV, as Orton further elaborated, data may be directly or indirectly varied either by reference to the rule-set or real-time input.
My exploration on 'computer generated notes' however, started with KeyKit, a freeware developed by Tim Thompson, available as an online free download. Initially I was looking for a tool to explore the idea of algorithmic composition. Keykit is freeware that works with MIDI, and a particularly useful tool for algorithmic composition, described by the inventor as "a programming language and graphical interface for manipulating and generating music".

Algorithmic composition or 'automated composition' according to Maurer (1999, as cited in Alpern, 1995) refers to "the process of using some formal process to make music with minimal human intervention". The word 'algorithm' is a term widely used in the field of computer sciences. At present the use of algorithm in musical compositions has evolved into a number of sub-categories such as aleatoric, determinacy, probabilistic and so on, which have been adapted from proven mathematical models. Cage utilized randomness in many of his works and interestingly, not so intensively through machines but through a more philosophical approach, and his references to the *I Ching Book of Changes* and *Zen Buddhism*. Unfortunately, it is not known how, or if there are any Malaysian composers who are influenced by Cage. However, there are a number of

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western trained composers in Malaysia who studied abroad and upon their return have served as academicians in most of our local higher institutions.

Birmingham ElectroAcoustic Sound Theatre (BEAST)

On the recommendation of colleagues at York University, I pursued further studies at the University of Birmingham from Autumn 1999. I first heard about the Birmingham ElectroAcoustic Sound Theatre (BEAST) while I was at York. My previous experienced on the York Ambisonics sound diffusion system provided me with indispensable ideas about the BEAST system, which was pioneered and developed at Birmingham. Founded earlier as a 32-speaker diffusion system, I experienced the BEAST system first-hand during the 'Arrival' concert in 2000, where I premiered my first diffused electroacoustic piece in the university's Barber Concert Hall. Composed at the BEAST studios, it marked my first exploration into electroacoustic composition with a multi-speaker set-up, and the BEAST systems, under the supervision of Jonty Harrison. It introduced me to an alternative approach on the realisation of electroacoustic music, away from notated notes towards the realm of sounds. Most of my early exploration of electroacoustic music was centered on the realm of sound and signal processing techniques. My understanding of psycho-acoustics and acoustics during my stay at York proved to be valuable, not to mention my experiences with the Prolog programming language, Assembler language, as well as C programming, which I found to be useful later as I became comfortable working with Max/MSP.

Being equipped with sufficient technical and aesthetical knowledge has given me the opportunity to explore the notion of sound in depth. Digital Signal Processing technique, particularly on the Fast Fourier Transform (FFT), and the science of musical sounds such as physics and psychophysics, psychoacoustics, and acoustics may not interest some musicians, or even some composers, but certainly, these are the most needed skills at present, at least at the fundamental level. Moore (1990) in elaborating upon the interdisciplinary context of music with computers outlined some of the issues, particularly on the required subjects for mastering computer music, which are also relevant to electroacoustic music.

Presenting Electroacoustic Music

An earlier development of musique concrète involved the use of tape machine manipulation techniques such as cut, splice, reverse, and delay, which are now recognized as 'classical tape technique', techniques pioneered by the early pioneers of musique concrète. During its early development, the focus was on venturing into new sounds and technique, however with the advancement of technology, there has been more effort made in terms of exploring new interfaces with more customized hardware and software. Present approaches have been more interactive, through installation works, as well as specific site conditions.

I came across the York Ambisonic diffusion rig while working as a sound person during *MediaMix96* at York University, in 1996. The art of diffusing sound in a

performance space is not something new in the presenting of electroacoustic music. Sound in space can be traced as far back as the early performance of the Gregorian chant through the counter responsorial performance of a choir. This 'call and response' approach was later adapted and translated into what we are experiencing at present, for example, the Ambisonic system at York University, BEAST diffusion system at the University of Birmingham, or Acousmonium IRCAM.

With the advancement of technology seen in the Western context, the exploration of sound in performing spaces has been built and developed from software rather than hardware. In Birmingham between the years 2000 to 2004, I experienced what is regarded now as an early stage of 'close eight' (also known as 'six plus two' BEAST diffusion technique, or simply '6+2') with collaborators David Berezan and Jonty Harrison (Wilson, 2010). The '6+2' was initially experimented with in the BEAST multichannel studio with the idea of having what we would regard as 'fix-eight and diffused'. It all started while I was exploring the 'surround concepts' on Pro Tools 5.1. In '6+2', the outputs from tracks 1 and 2 of the eight channels are usually treated as a 'normal' stereo pair for diffusion via the BEAST diffusion system, and tracks 3 to 8 are assigned directly to six speakers positioned 'close in' to the audience. The whole concept was to offer greater flexibility than the standard 8-channel mixes through more options for stereo diffusion while also having the 'pre-diffused' set. The 'close in' functions as fixed diffusion patterns depending on the material and on the aims of the individual composer; and in a concert, the stereo mix is diffused in real-time. The technique was used during BEAST's *New Sound–New Art* concert in November 2001 at the Central Birmingham Symphony Orchestra Centre (CBSO), Birmingham.

Figure 1 The BEAST set-up in 2003.

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Figure 2 The Acousmonium in 2008.

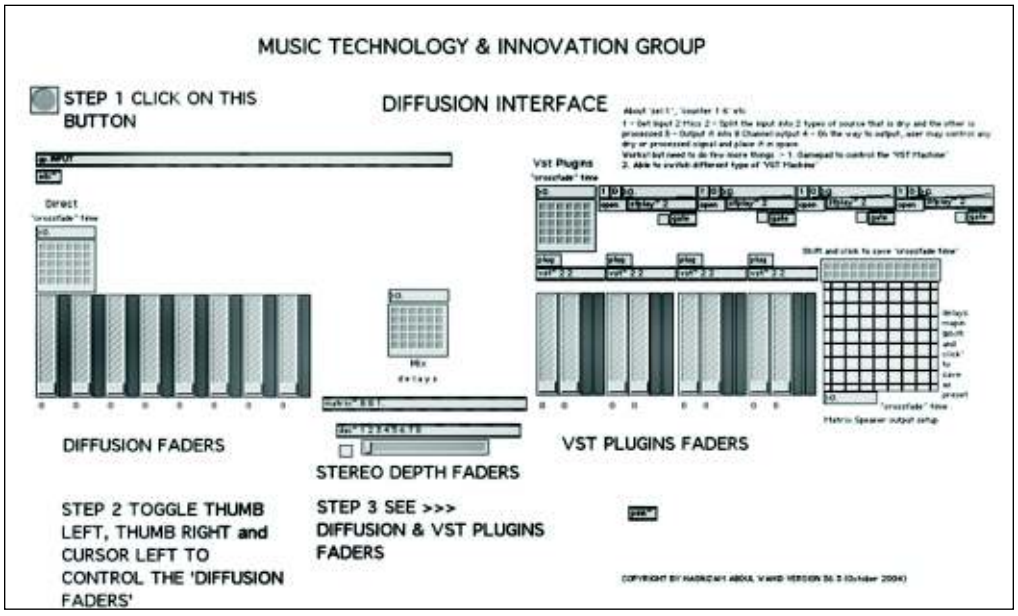

Figure 3 Example of an 8-channel diffusion interface on Max/MSP with Gamepad as the controller for the faders.

My experience working on the notion of sounds, gives me the opportunity to explore beyond the continuum of pitch and rhythm. In his early days, Russolo bravely explored the art of noises, Edgar Varese organised sound, and Pierre Schaeffer, musique concrète.

Trevor Wishart is a British renowned electracoustic composer who has explored a series of 'amplified voices'. Most of his works deal mainly with the human voice, transformed and manipulated, as heard in his compositions *Vox Cycle* (1990), *Red Bird/Anticredos* (1992), and *Tongues of Fire* (2000). Wishart's (2000) idea of the "nodes and branches", particularly on sculpting and processing sounds, has been my model on composing with sound. The "tree-generation" and "interconnected sounds" approach, in other words, a sound which is later developed into a series of macro and micro processing. Recorded sound according to Wishart (2000) was selected to be part of a composition through selections of their aesthetic values and relationship with one and another. In discussing his 'Sonic Art', Wishart (2000) acknowledged and anticipated the changing views on what constitutes music, expanding our knowledge about the nature of sounds due to the existence of high-speed computers. He suggested that computer technology would allow us to have full control of the internal parameter of sounds, hence suggesting a parametrical approach in electroacoustic musical compositions. The term 'parametrical', in the context of electroacoustic composition is particularly important and relevant. My early days of composing and processing sounds were largely based on classical tape techniques, and more of a 'processed and listened' approach. However, after being acquainted with CDP, I have taken more of a parametrical approach with detailed notes on the type of processing and its values, which made my compositional approach more quantitative rather than qualitative.

Few Malaysians are aware of the notion of sound art, perhaps due to being so adapted and subscribed to popular music. The word 'experimental music' is sometimes loosely used to represent music which is primarily experimented with through traditional musical instruments and contemporary musical composition. To date there have been several attempts at exploring sound art in Malaysia. One example is the Experimental Musicians and Artist Cooperative Malaysia (EMACM), based in Kuala Lumpur, and UNIMAS Electroacoustic Group (EAG), based at the Faculty of Applied and Creative Arts, Sarawak. Both groups have presented a number of mini concerts. In Malaysia, composers such as Goh Lee Kwang and Kamal Sabran are among the best-known artists who are actively involved in this genre.

At the Faculty of Applied and Creative Arts (FACA), exploring the sound domain, particularly electroacoustic music, has been our niche area since the early years of our music programme. This has resulted in a series of concerts and students' final year projects where most of the projects revolve around a collaborative medium between sound and visual aspects. At FACA, we probably build our interest in art through new media, particularly in the electronic arts, and credit should be given to Hasnul J Saidon and Niranjan, who have been responsible for charting our vision towards art and technology. The *1st Electronic Art Show* (1997) can be regarded as our first experience of compiling and collecting works of that nature.

Many composers have described timbral morphology as a typical approach in realizing electroacoustic music. As tools in composing electroacoustic music evolve, so do compositional techniques. There has never been a right or wrong way to approach electroacoustic music but there are fundamental rules which are qualitatively judged, such as what constitutes good sounds, which can only be interpreted through listening. Long hours of time in the studio, particularly on sound processing, has been the

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method of composing. At present, composing electroacoustic music is confined within the studio domain, or at a minimum level at music workstations.

Acousmatic Music

Previously there have been some debates regarding the word 'acousmatic'. During the early years of musique concrète, as mentioned by Dhomont (1996), Jerome Peignot used the term 'acousmatic' to define sound which is heard but the sources are hidden. The act of listening to a lecture behind a curtain can be traced as far back as Pythagoras in the sixth century BC. The notion of 'sound heard, source unseen' was later translated into the act of listening in the darkness of a concert hall through a multi-speaker output and real-time diffusion by the composer. This explains the importance of having a diffusion system such as the BEAST, Acousmonium, and Ambisonic. Francois Bayle introduced the term 'acousmatic music' in 1974, which complemented the early definition of 'acousmatic' by Peignot, as visualizing music in the context of acousmatic music as visualizing sound. Sounds are recorded, manipulated or processed in the studio or workstations, and later presented in a concert hall with a multichannel set-up. In the Malaysian context, having a group of traditional musicians sitting behind a screen in the wayang kulit performance is nothing new. The eastern traditions of puppet play, such as *wayang beber*, *par*, *wayang gedek* or *pien wu*, or indeed any form of puppet playing, have been accompanied by musicians behind a screen, which complements the act of presenting sounds behind a curtain as described earlier by Pythagoras. The concept of puppets playing behind a curtain in *wayang kulit* performances is also recognized as one of the earliest forms of multimedia performance, long before the existence of television or onscreen presentation tools such as PowerPoint or Prezi. The act of a group of musicians playing percussion instruments accompanying dancers behind a half-raised curtain about a metre from the floor in *bermukun* or *bergendang* among the Malays of Sarawak is also something that cannot simply be ignored. The integration between visual or physical activities accompanied by musicians behind a screen may be the best version of our own multimedia practices, yet perhaps this has not been highlighted to any great extent.

Telemusic

In the vast technologically centered age, Malaysians are no longer confined, with social network communication sites such as Facebook, Twitter and others, providing the opportunity to connect and communicate. Malaysians, particularly the techno-centric generation, are more open-minded, and techno-savvy. Malaysians were once considered reserved and introverted, and while this is not necessarily relevant today, we are yet to witness a significant impact of using these tools specifically for musical applications.

In 2011 I was involved in a performance of electroacoustic music through a high-speed research network called IPV6. The idea of harnessing the network for live performance was discussed in a 2010 meeting in Beijing, during Musicacoustica 2010,

my first opportunity to explore telemusic. My piece *Mikro I* was presented with a live performance including *sundatang*, a traditional musical instrument from Sabah, together with a cellist from the Beijing Conservatory. Our performance was set up specifically running on IPV6. After many hours dealing with the network, together with technical support from our computer technicians, as well as online support from Ken Fields and Ian Whalley, the performance was finally executed. This first ever performance of Asian telemusic concert from Malaysia, is something that can hopefully inspire similar ventures in the future.

Conclusion

It is anticipated that the mastery of technical know-how, such as programming languages, live performance through networks, as well as mixed-media and medium approaches will be an important approach in the future. On the other hand, composers should also note the aesthetical issues of composition. With the advancement and progress of computer technology, the use of portable computers such as the iPad, or laptop computers for musical performances will become widespread, particularly in the computer or electroacoustic music community; and issues on engaging audience in a performance, such as composer's intention and audience reception will need to be addressed. Music is a highly technical subject, and when using computers as tools for either composing or performing, acquiring relevant technical skills as well understanding aesthetic issues, particularly in electroacoustic music, are of critical importance. In other words, cross-disciplinary collaboration between faculties is something which Malaysian music educators need to address as we move towards the future.

The Malaysian music industry was predominantly developed based on our long history in popular music, however 'art-music' should also be noted and recognized. Malaysian musicologists should also embark on research which refines the terminology and definitions of our music, particularly traditional styles. With the support of the government through initiatives such as *Dasar Industri Kreatif Negara* (National Creative Industry Policy), as well as the Malaysian Music Industry Action Plan 2011–2013, there should be more creative ventures and collaborative projects between composers, practitioners, as well as educators.

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Biography

Hasnizam Abdul Wahid studied composition (electroacoustic music) with Jonty Harrison at the University of Birmingham, UK, between 2000 and 2004. He has been a first-prize winner in the residency category in the Bourges 2001 Electroacoustic Music Competition, was awarded a Mention during the L'espace du Son 2002 Competition in Brussels, and gained a Pre-Selection of Jury for his work Rahah in the Electroacoustic Sonic Art Works category in Bourges 2003 and a Pre-Selection of Jury in Bourges 2005 for his piece Interplay. As a scholar and among early electroacoustic composers in Malaysia, he plays a key role in introducing electroacoustics in Malaysia. He has participated in various national and international festivals, such as the 1st Electronic Art Show in 1997, held at the National Art Gallery, Malaysia, where he showcased his first experimental tape work entitled Solemn. He was also part of a team developing a research project known as the "Wayang Virtual" in 1997. Other contributions include establishing the UNIMAS Electroacoustic Group (EAG) with Hasnul J Saidon, a group formed in 1997 at Universiti Malaysia Sarawak, Malaysia, which has served as a catalyst for experimental music performance in Malaysia. The group has performed in major concerts including the Rainforest World Music Festival, in 1998, held in Sarawak, Malaysia. Among his selected pieces are The Racquet, presented at Empirical Soundings, Soundscapes from the Commonwealth, in Bendigo, Australia, as part of the cultural festival presented during the Commonwealth Games 2006, and Mikro, a multichannel acousmatic piece presented during Mantra of the Future (2007). Hasnizam Abdul Wahid is currently residing at the Faculty of Applied and Creative Arts, Universiti Malaysia Sarawak, Sarawak, East Malaysia (also known as Borneo), Malaysia.

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