World Wide Licenses Ltd.

Application
For
Certification
(FCC ID: NW73016)

MOVI Digital Camera

WO# 0113116
WN/at
February 19, 2002

FCC ID : NW73016

LIST OF EXHIBITS

MEASUREMENT/TECHNICAL REPORT

World Wide Licenses Ltd. - MODEL: 3016, CIC 300, 3063, 0098/3070
FCC ID: NW73016

February 19, 2002

This report concerns (check one:) Original Grant__X__ Class II Change__

Equipment Type: Computer Perpherial (example: computer, printer, modem, etc.)

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes____ No_X___

If yes, defer until: _____
date

Company Name agrees to notify the Commission by: _____
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes_____ No_X___

If no, assumed Part 15, Subpart B for intentional radiator

Report prepared by: Wilbur Ng
Intertek Testing Services
2/F., Garment Center,
576, Castle Peak Road,
HONG KONG
Phone: 852-2173-8502
Fax: 852-2742-9149

Table of Contents

List of attached file

Exhibit type	File Description	filename
Test Report	Test Report	Test Report.pdf
Operation Description	Technical Description	Technical Description.pdf
Test Setup Photo	Radiated Emission	Test Setup Photographs.pdf
External Photo	External Photo	External Photographs.pdf
Internal Photo	Internal Photo	Internal Photographs.pdf
Block Diagram	Block Diagram	Block Diagram.pdf
Schematics	Circuit Diagram	Circuit Diagram.pdf
ID Label/Location	Label Artwork and Location	Label Artwork & Location.pdf
User Manual	User Manual	Manual1.pdf to Manual2.pdf

EXHIBIT 1

GENERAL DESCRIPTION

1.0 General Description

1.1 Product Description

The equipment under test (EUT) is a Digital Camera with flash light. The EUT is powered by 2 AAA size batteries. There are four switches on the EUT, which are used to control the ON/OFF, taking an image and other selecting function such as video cam & webcam. And it could be connected to computer as a web-cam and via the USB cable and download the photo to computer by USB cable. And the EUT can store approximately 16 Hi-Res (High Resolution) 64 Normal-Res (Normal Resolution) & 128 Low-Res (Economy Resolution) images. There is a cool-icam plus software needs to install to a computer.

The Model: CIC 300, 3063 and 0098/3070 are the same as the tested Model: 3016 in hardware and software aspect. The difference in the Model No. is only for marketing strategy.

The brief circuit description is saved as filename: Technical Description.pdf

1.2 Related Submittal(s) Grants

This is a single application for certification of a Computer Perherial.

1.3 Test Methodology

The radiated emission measurements were performed according to the procedures in ANSI C63.4 (1992). All measurements were performed in Open Area Test Sites. Preliminary scans were performed in the Open Area Test Sites only to determine worst case modes. All Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section"** of this Application.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the emission data is located at Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong. This test facility and site measurement data have been fully placed on file with the FCC.

EXHIBIT 2

SYSTEM TEST CONFIGURATION

2.0 System Test Configuration

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (1992.)

The EUT was powered by new a 2 new AAA size batteries during test.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The system was configured for testing in a typical fashion (as a customer would normally use it).

During testing, the peripheral locations were not varied with respect to the main unit.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it) and tested in the download mode.

2.2 EUT Exercising Software

“My Camera Driver” Supplied by Client.

2.3 Special Accessories

There is a Shielded USB cable with ferrite, which is provided with EUT and was connected with EUT during test was connected with the EUT during test.

2.4 Equipment Modification

Any modifications installed previous to testing by World Wide Licenses Ltd. will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services.

2.5 Support Equipment List and Description

Support Equipment:

1. HP Computer
   Model: DTPC-17
   S/N: SG94482658
   (Tested to comply with FCC standards)
2. HITACHI Monitor
   Model: CM643ET
   S/N: T9G000030
   (Tested to comply with FCC standards)
3. HP Mouse
   Model: M-S34
   S/N: LZE937078518
   (Tested to comply with FCC standards)
4. HP Printer
   Model: C4224A
   S/N: SGGJ085319
   (Tested to comply with FCC standards)
5. HP Keyboard
   Model: SK-2502C
   S/N: M91112642
   (Tested to comply with FCC standards)
6. Modem
   Model: 6800CN
   FCC ID: BEJ9D9070038

Cables: Three AC Power (2m, unshielded) computer,
printer and monitor
One serial port cable (1.5m, shielded, metal hook)
One COM port cable (1.5m, shielded)
One monitor cable (1m shielded, ferrite)
One telephone line (2m, unshielded)
One USB cable (1m shielded)

Confirmed by:

Wilbur Ng
Manager
Intertek Testing Services
Agent for World Wide Licenses Ltd.

_____Signature

February 19, 2002 _____Date

EXHIBIT 3

EMISSION RESULTS

3.0 **Emission Results**

Data is included worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG

where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB
AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

FS = RR + LF

where FS = Field Strength in dBµV/m
RR = RA - AG in dBµV
LF = CF + AF in dB

Assume a receiver reading of 52.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dBµV/m. This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 52.0 dBµV/m
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
FS = RR + LF
FS = 23 + 9 = 32 dBµV/m

RR = 23.0 dBµV
LF = 9.0 dB

Level in mV/m = Common Antilogarithm [(32 dBµV/m)/20] = 39.8 µV/m

3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission

144.011 MHz

For electronic filing, the worst case radiated emission configuration photograph is saved with filename: Test Setup Photographs.pdf

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 4.5 dB

TEST PERSONNEL:

Signature

Anthony K. M. Chan, Compliance Engineer
Typed/Printed Name

February 19, 2002
Date

Company: World Wide Licenses Ltd. Date of Test: November 30, 2001
Model: 3016

Table 1

Radiated Emissions

Polarity	Frequency (MHz)	Reading (dBµV)	Antenna Factor (dB)	Pre-Amp Gain (dB)	Net at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
V	48.006	40.4	11	16	35.4	40.0	-4.6
H	96.006	43.0	11	16	38.0	43.5	-5.5
H	144.011	42.0	13	16	39.0	43.5	-4.5
H	192.013	38.7	16	16	38.7	43.5	-4.8
H	240.013	34.0	19	16	37.0	46.0	-9.0
H	288.021	35.4	22	16	41.4	46.0	-4.6
H	336.020	33.1	24	16	41.1	46.0	-4.9
H	384.021	31.0	24	16	39.0	46.0	-7.0
H	432.021	27.3	25	16	36.3	46.0	-9.7
H	480.021	23.0	26	16	33.0	46.0	-13.0
H	528.021	27.0	27	16	38.0	46.0	-8.0
H	576.021	27.1	28	16	39.1	46.0	-6.9
H	720.031	27.3	30	16	41.3	46.0	-4.7
H	768.026	24.4	31	16	39.4	46.0	-6.6

Notes:
1. Negative sign in the column shows value below limit.
2. Peak Detector Data unless otherwise stated.
3. All measurements were made at 3 meter. Harmonic emissions not detected at the 3-meter distance were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

Test Engineer: Anthony K. M. Chan

EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

4.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename:
External Photographs.pdf and Internal Photographs.pdf

EXHIBIT 5

PRODUCT LABELLING

5.0 **Product Labelling**

For electronic filing, the FCC ID label artwork and the label location are saved with filename: Label Artwork & Location.pdf

EXHIBIT 6

TECHNICAL SPECIFICATIONS

6.0 Technical Specifications

For electronic filing, the block diagram and schematics are saved with filename: Block Diagram.pdf and Circuit Diagram.pdf respectively.

EXHIBIT 7

INSTRUCTION MANUAL

7.0 Instruction Manual

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: Manual1.pdf to Manual2.pdf

This manual will be provided to the end-user with each unit sold/leased in the United States.